Environmental Assessment for Temporary Brigade Combat Team Support Facilities and Brigade Combat Team Training at Fort Benning, Georgia

Environmental Management Division,
U.S. Army Garrison, Fort Benning, Georgia

and

U.S. Army Corps of Engineers
Fort Worth District, Texas

January 2005

DRAFT
FINDING OF NO SIGNIFICANT IMPACT

1.0 DESCRIPTION OF THE PROPOSED ACTION

The proposed action is to develop Brigade Combat Team (BCT) support facilities to accommodate the temporary stationing of the 5th Brigade of the 25th Infantry Division, and to have the BCT complete training exercises using existing ranges and training areas at Fort Benning. Temporary facilities (consisting of austere, modular, and/or relocatable buildings) are required to address this temporary stationing action. The BCT will train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning.

2.0 DESCRIPTION OF THE ALTERNATIVES

Alternatives to the proposed action were developed as part of the planning process and include:

Alternative I (preferred action): Locate the temporary support facilities in three clustered areas within the East, North, and Central Harmony Church areas totaling approximately 247 acres. With this alternative, four World War II era buildings would be demolished and two others would either be reused by the BCT or demolished. The BCT would train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning; existing environmental controls and monitoring for environmental effects for these areas would continue.

Alternative II: Locate the temporary support facilities for the BCT within the East Harmony Church area within an area covering approximately 238 acres. Like Alternative I, the BCT would train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning; existing environmental controls and monitoring for environmental effects for these areas would continue.

Alternative III (no action): With the no-action alternative, temporary support facilities for the new BCT would not be developed; Soldier associated with the BCT would be housed in hotels and apartments or houses in nearby communities. Training would occur on existing ranges and training areas on Fort Benning. This alternative does not satisfy the purpose and need for the project because it is essential to the mission that Fort Benning has support facilities to accommodate the 5th/25th with adequate facilities where the Soldiers can live, work, and train.

3.0 ANTICIPATED ENVIRONMENTAL EFFECTS

The Environmental Assessment (EA) indicates that Alternative III would have significant adverse effects on the Army because of the substantial costs of housing approximately 3,400 Soldiers off Post. BCT Soldiers would lack the facilities needed to complete their mission effectively. The EA indicates that with adherence to best management practices, no significant adverse environmental impacts would result from the proposed action as implemented by either Alternative I or Alternative II. This determination is based on the following findings:

- With the implementation of management practices such as Fort Benning's current red-cockaded woodpecker management program, the proposed action would not adversely impact any threatened or endangered species potentially occurring in the project area.
- The proposed action would not adversely affect cultural resources.
- The proposed action would result in no adverse effects to air quality.
- The proposed action would not affect wetlands.
- Management practices would mitigate potential effects to soils and water quality that may result from ground disturbance.
- No unacceptable adverse cumulative or secondary impacts would result from implementing the proposed action through Alternative I or II.

In accordance with 32 Code of Federal Regulations (CFR) 651.15, the Army must indicate if any mitigation measures would be needed to implement the proposed action or any alternative selected as the preferred alternative under this environmental assessment. For purposes of this EA, it was determined that no mitigation measures would be needed to arrive at a finding of no significant impact if the proposed action or alternatives were selected for implementation at Fort Benning.

4.0 CONCLUSION

Based on review of the information contained in this EA, I have determined that implementation of Alternative I is the best course of action. While Alternative II also provides an acceptable site, this location would be better suited for permanent support facilities should potential future permanent facilities be required at Fort Benning after Base Realignment and Closure decisions are made in 2005. I have determined that the establishment of support facilities for the BCT and the training activities conducted by the BCT is not a major Federal action within the meaning of Section 102(2)(c) of the National Environmental Policy Act 1969. Accordingly, the preparation of an Environmental Impact Statement (EIS) is not required.

5.0 PUBLIC AVAILABILITY

a. The EA and draft Finding of No Significant Impact (FNSI) for the proposed action will be available to the public for a review period of 15 days starting from the first day of publication in *The Columbus Ledger-Enquirer*, in accordance with part 1501.4 (e)(1) of Title 40 of the Code of Federal Regulations and Army Regulation 200-2. These documents are available at the W.C. Bradley Memorial Library, South Lumpkin Library, Fort Benning Main Post Library, and at the Installation website: http://www.benning.army.mil/EMd/_program_mgt/legal/index.htm. A notice of availability (NOA) of the EA and draft FNSI was mailed to all agencies/individuals/ organizations on the distribution (mailing) list for the proposed action.

b. Summary of Public Comments: Reserved until completion of the public comment and review period.

6.0 REQUESTS

Requests for additional information or submittal of written comments may be made within 15 days after first publication date. Direct requests and comments to Mr. John Brown, NEPA Program Manager, Fort Benning Directorate of Public Works, Environmental Management Division, Attention: ATZB-PWN-E, Meloy Hall, Building #6, Fort Benning, Georgia 31905-5122.

FINDING OF NO SIGNIFICANT IMPACT
REVIEWED AND APPROVED BY:

Date

Ricardo R. Riera
Colonel, IN
Garrison Commander

Environmental Assessment for Temporary Brigade Combat Team Support Facilities and Brigade Combat Team Training at Fort Benning, Georgia

Environmental Management Division,
U.S. Army Garrison
Fort Benning, Georgia

and

U.S. Army Corps of Engineers, Fort Worth District
Fort Worth, Texas

Environmental Assessment for Temporary
Brigade Combat Team Support Facilities and Brigade Combat Team Training at
Fort Benning, Georgia

Lead Agency:	Army at Fort Benning
Title of the Proposed Action:	Establishment of Temporary Brigade Combat Team Support Facilities and Brigade Combat Team Training at Fort Benning
Affected Jurisdictions:	States of Georgia and Alabama; Counties of Chattahoochee, Muscogee, Marion, and Russell
Prepared by:	Environmental Management Division, U.S. Army Garrison, Fort Benning, Georgia
Contact Person for EA:	John Brown, NEPA Program Manager Directorate of Public Works Environmental Management Division Meloy Hall (Building 6) Fort Benning, GA 31905-5122 706-545-4211

ABSTRACT

The Army is in the process of adding ten Brigade Combat Teams (BCTs) to its inventory in the next 2 years. One of these, the 5th Brigade of the 25th Infantry Division, will be temporarily stationed at Fort Benning. The BCT is expected to consist of approximately 3,400 Soldiers and arrive at Fort Benning by fall 2005. The proposed action addressed in this Environmental Assessment is to develop, use, and maintain the support facilities needed for the BCT and to address BCT training. Temporary facilities, consisting of austere, modular, and/or relocatable buildings, along with supporting utilities and infrastructure, would be put in place to support the BCT. The 5th Brigade of the 25th Infantry Division will remain temporarily stationed at Fort Benning until a permanent stationing decision is made.

This draft Environmental Assessment (EA) analyzes three alternatives. Alternatives I and II would establish support facilities in two different locations within the Harmony Church area of Fort Benning. Alternative III is to take no action and not develop support facilities for the BCT. All three alternatives include BCT training. The effects of these alternatives are discussed in regard to soils, water quality, biological resources, land use, recreational resources, socioeconomics, environmental justice, cultural resources, transportation, utilities, hazardous materials and waste, public health and safety, air quality, and noise. With implementation of best management practices and mitigation measures identified in this EA, no significant impacts were identified during the impact assessment. Cumulative impacts also are analyzed in the EA.

EXECUTIVE SUMMARY

This Environmental Assessment (EA) provides an analysis of the effects on the natural environment and human environment that would result from construction and operation of facilities necessary for the temporary stationing of a new Brigade Combat Team (BCT) at Fort Benning. Additionally, this EA also analyzes potential impacts that would result from training performed by the BCT on existing ranges and training areas while stationed at Fort Benning.

The Army intends to temporarily station the 5th Brigade of the 25th Infantry Division at Fort Benning. BCT Soldiers will begin arriving at Fort Benning by early fall of 2005; the BCT is expected to be at full strength with approximately 3,400 Soldiers by mid-October 2005. As such, temporary facilities are needed so that Soldiers will have facilities to support them. Temporary construction would include parking areas, maintenance, barracks, administrative, dining, and other support facilities. The BCT would train utilizing training ranges and facilities currently located on Fort Benning.

Three alternatives and their respective primary environmental effects are considered in this document, as described below. Table ES-1 presents a summary comparison of impacts among the alternatives. As this table demonstrates, no significant impacts would result.

Table ES-1 Comparative Summary of Impacts

Resource	***Level of Impacts by Alternative***		
	Alternative I	*Alternative II*	*No Action*
Natural Environment			
Soils	Insignificant	Insignificant	None
Water Quality	Insignificant	Insignificant	None
Biological Resources	Insignificant	Insignificant	None
Human Environment			
Land Use	Insignificant	Insignificant	None
Recreation	Insignificant	Insignificant	None
Socioeconomics (including Environmental Justice)	Minor Beneficial	Minor Beneficial	Minor Beneficial and Adverse
Cultural Resources	None	None	None
Transportation	Insignificant	Insignificant	None
Utilities	Insignificant	Insignificant	None
Hazardous Materials and Waste	Insignificant	Insignificant	None
Public Health and Safety	Insignificant	Insignificant	None
Air Quality	Insignificant	Insignificant	None
Noise	Insignificant	Insignificant	Insignificant
Protection of Children	None	None	None
Provision for the Handicapped	None	None	None
Visual Resources	None	None	None

Alternative I (Preferred Action)

Alternative I would locate the temporary support facilities in three clustered areas within the East, North, and Central Harmony Church areas totally approximately 247 acres. Four World War II buildings would be demolished and two others would either be reused by the BCT or demolished. The BCT would train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning; existing environmental controls and monitoring for environmental effects for these areas would continue.

Environmental effects would include short-term increases in soil erosion and sedimentation in storm-water runoff resulting from the ground disturbance and vegetation removal during site preparation for the support facilities. The application of best management practices – such as implementing the Erosion, Sedimentation, and Pollution Control Plan; using appropriate soil erosion control techniques; and prohibiting construction-related activities within a minimum of 25 feet from perennial streams – would minimize short- and long-term effects.

If the entire site was disturbed (worst-case analysis), approximately 129 acres of longleaf and/or loblolly pine-dominated forest, serving as foraging habitat for the endangered red-cockaded woodpecker (RCW), could be removed. Actual loss of tree-covered areas would depend on the final design, but is expected to be less than the maximum acres as vegetative buffers between facilities are desired. The foraging habitat analysis identified that a total of 37.5 acres of good quality RCW habitat and 7 acres of medium quality RCW habitat associated with Cluster HCC-10 and HCC-11 would be affected. Of this total of 44.5 acres, 9.5 acres are within the quarter-mile foraging circles. Alternative I also would affect an inactive recruitment cluster and result in a loss of 42.9 acres of foraging habitat. The loss of RCW habitat would be offset by habitat restoration and/or population enhancements consistent with Fort Benning's current RCW management program.

Effects on the human environment would be insignificant. The support facilities would be consistent with the existing land use in the area, although the extra traffic passing through the access control point (security gate) would increase traffic back-ups at peak hours. Increased throughput in training could make training areas less available for recreational activities such as hunting and hiking. Demand for utilities could be satisfied by existing suppliers and the installation of new utility distribution lines would enhance the existing infrastructure. This alternative would have no adverse effects on cultural resources, public health and safety, hazardous materials or hazardous materials management. Socioeconomic effects would be beneficial as the BCT would bring new employment to the Columbus, Georgia-Alabama Metropolitan Statistical Area and purchases made by Soldiers and their families would contribute to the local economy. Short-term air pollutant emissions would increase minimally from construction-related activities, and emissions would also increase in the long-term from vehicular travel associated with the increase in personnel; however, emissions would be well below regional thresholds for complying with the National Ambient Air Quality Standards and the State Implementation Plan. An increase in range activities (e.g., wheel and track vehicle traffic, tank movement, and artillery firing) from BCT training operations would extend Noise Zone III 3,280 feet (1,000 meters) farther off-Post. Noise Zone III represents noise levels that are incompatible with sensitive land uses such as residences, schools, and medical facilities. These noise levels

could increase the number of citizens annoyed and present a potential adverse impact to those experiencing a change; however, no sensitive noise receptors are within the area affected.

Alternative II

Under Alternative II, Fort Benning would locate the temporary support facilities for the BCT within the East Harmony Church area within an area covering approximately 238 acres. The Military Police canine kennel and the Bradley drivers' training course would be relocated to locations that are compatible with these types of facilities. Like Alternative I, the BCT would train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning; existing environmental controls and monitoring for environmental effects for these areas would continue.

Like Alternative I, environmental effects associated with the implementation of Alternative II would include short-term increases in soil erosion and sedimentation in storm-water runoff that would be minimized with best management practices. Potential adverse effects on water quality from sedimentation would likely be less than with Alternative I because fewer streams would potentially be affected in this area.

If the entire site were disturbed (worst-case analysis), approximately 59 acres of longleaf and/or loblolly pine-dominated forest (RCW foraging habitat) could be removed. Actual loss associated with the final design is expected to be less and the loss of RCW habitat would be offset by habitat restoration and/or population enhancements consistent with Fort Benning's current RCW management program. The foraging habitat analysis identified that a total of 14 acres of good quality RCW habitat and 2 acres of medium quality RCW habitat associated with Cluster HCC-03 would be affected. Of this total of 16 acres, 3 acres are within the quarter-mile foraging circles. The loss of RCW habitat would be offset by habitat restoration and/or population enhancements consistent with Fort Benning's current RCW management program.

The effects on land use, recreation, transportation, utilities, cultural resources, public health and safety, hazardous materials management, socioeconomics, air quality, and noise would be similar to those described for Alternative I.

Alternative III (No Action)

With the no-action alternative, temporary support facilities for the new BCT would not be developed, but the BCT would train at existing ranges and training areas at Fort Benning. To house the Soldiers, the Army would have to lease hotels, apartments, and houses in the communities surrounding Fort Benning; costs to do this are projected to exceed $55,000 per day. This alternative does not satisfy the purpose and need for the project because it is essential to the mission that Fort Benning have support facilities to accommodate the $5^{th}/25^{th}$ with adequate facilities where the Soldiers can not only train, but also live and work.

The no-action alternative would not result in ground disturbance or vegetation removal associated with establishing temporary support facilities, resulting in no change to the sites proposed for Alternatives I and II. However, the Army intends to temporarily station the BCT at Fort Benning so the lack of support facilities would substantially limit and degrade the Soldiers and the BCT's ability to execute their mission.

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CHAPTER 1

PURPOSE AND NEED FOR THE PROPOSED ACTION

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

In October 1999, the Secretary of the Army and the Chief of Staff of the Army articulated a multi-phased plan to transform the Army over a 30-year period to adapt to the warfare challenges emerging in the 21st century. The ability to respond to different types of military operations includes the need to react quickly and to be more deployable, agile, versatile, lethal, survivable, and sustainable. By 2007, the Army expects to have created a modular Army by divesting Cold War headquarters and structures, transitioning from a Division-based force to a Brigade-based force, and restructuring the Reserves (Roosevelt 2004, U.S. Army 2002).

Three factors are influencing the Army's organization and stationing. First, today's battlefield is best fought with smaller, more modular units than used in the past; consequently, the Army is transforming to a Brigade-based force. Second, many of the Army's forces stationed overseas are in locations more appropriate during the Cold War than for regions where conflicts are fought today. Third, the Army has been authorized to add 30,000 Soldiers to its ranks. The proposal to transform the Army to adapt to 21st century military demands has been addressed in a Programmatic Environmental Impact Statement (EIS) prepared by the U.S. Army Corps of Engineers, Mobile District in 2002. Stationing decisions, including those at Fort Benning, are addressed in that Transformation Programmatic EIS.

Table 1-1 illustrates how the Army has historically been organized. The Division served the Army well in previous wars, but the Division became too large and cumbersome to fit the needs of the 21st century battlefield. Today's weapons provide increased lethality and range, making it desirable to reduce the size and increase the flexibility of fighting formations. Consequently, the U.S. Army is undergoing a transformation to become a more modular Army that is more streamlined, standardized, and self-contained.

Table 1-1 Historical U.S. Army Organization

Elements or Units of Command	*Typical Number of Soldiers*	*Basis of Structure*
Army	50,000+	Combines two or more corps
Corps	20,000 to 45,000	Consists of two to five divisions
Division	10,000 to 15,000	Usually consists of three brigades
Brigade	3,000 to 5,000	Consists of two to five battalions
Battalion	300 to 1,000	Consists of four to six companies
Company	62 to 190	Consists of three to five platoons
Platoon	16 to 44	Consists of two to four squads
Squad	9 to 10	Size depends on function

Source: About, Inc. 2004

The Office of Force Transformation was established on 29 October 2001, soon after the events of September 11. In the April 2003 *Transformation Planning Guidance*, Secretary of Defense Rumsfeld identifies transformation as: "A process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people, and organizations that exploit our nation's advantages and protect against our asymmetric

vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world" (DoD 2004).

Transformation is the process moving the Army from where it was in the late 1990s to the objective force of the 21st century. Transformation is designed to take advantage of opportunities presented by emerging technologies and changes in the Army's missions in the post-Cold War world. Ultimately, transformation will enable the Army to deploy with the speed of its current light forces, but arrive with the full combat power of its heavy forces.

Army transformation is proceeding in three phases. In the Initial Phase, the Army created two Initial BCTs at Fort Lewis to validate the organizational and operational model of Interim BCTs. The Interim Capability Phase currently in progress involves converting five to eight existing brigade-sized units to Interim BCTs; this process starts with fielding interim armored vehicles and ends with a fully manned, equipped, and trained BCT. The Interim Force would be available for employment, with augmentation, in major-theater wars. Interim Force units would be highly mobile at the strategic, operational, and tactical levels. The final phase of transformation is the Objective Capability Phase in which the Army becomes fully converted to the Objective Force, which has the characteristics of being more responsive, deployable, agile, versatile, lethal, survivable, and sustainable (USACE Mobile District 2002).

In this process, the Army is converting six brigades to the Stryker Force – using off-the-shelf weapons systems and current cutting-edge technology – to a medium-weight configuration. The initial Stryker Brigade Combat Teams are Fort Lewis' 3rd Brigade, 2nd Infantry Division, which has completed the process of transformation, and 1st Brigade, 25th Infantry Division, which began the process in Jan 2002 and will be complete in 2004 (U.S. Army 2003). New brigades will stand up at Forts Hood, Polk, and Richardson in fiscal year 2005, and at Forts Bliss, Riley, and Bragg in fiscal year 2006. The 3rd Brigade of the Fort Stewart-based 3rd Infantry Division was established at Fort Benning in the summer of 2003; an additional 400 Soldiers are expected to join the 3rd Brigade in 2005. The 3rd/3rd began the process of transformation in 2004 and is expected to complete the conversion to modularity in 2006 (U.S. Army Forces Command 2004).

The transformation to modularity improves the Army's ability to fight the global war on terror, positions Army forces for future commitments, and supports the Army's efforts to be a quality force with expeditionary capabilities and the ability to integrate jointly with other branches of the military. Modular forces are capable of operating across the entire range of military operations. As part of the Army transformation, capabilities previously found within Divisions and Corps are now accomplished in the smaller Brigade Combat Team (BCT, also sometimes referred to as a Unit of Action).

In addition to the transition to modularity, the Army has been authorized to add 30,000 Soldiers to its ranks over the next three years. Of these 30,000 Soldiers, 23,000 will be infantry and will likely train at Fort Benning.

On July 23, 2004, the Department of the Army announced that one of the ten BCTs to be added to the Army inventory in the next 2 years would be stationed at Fort Benning until a permanent stationing decision is made (Walsh 2004). The BCT is expected to consist of approximately

3,400 infantry Soldiers who will form the 5th Brigade of the Hawaii-based 25th Infantry Division and be stationed at Fort Benning by Fall 2005. The 5th/25th will be a new brigade formed through global repositioning in which Soldiers from various locations throughout the world will stand down from their units and come together to form the 5th/25th. The Programmatic EIS regarding Army Transformation addresses the effects of global repositioning as well as the Army's reorganization from larger units to smaller units that are able to function independently (USACE Mobile District 2002).

Until the 2005 Base Realignment and Closure (BRAC) initiative is completed, all BCT assignments are temporary and support facilities will be in temporary or relocatable modular buildings. New support facilities are needed at Fort Benning to accommodate the temporary stationing of the new BCT. After BRAC decisions are made, it is possible that the Army may decide to permanently station the 5th Brigade of the 25th Infantry Division at Fort Benning. To plan for this potential situation, locations that would be suitable for both temporary and possible future permanent facilities at Fort Benning were studied. The goal was to ensure adequate space could be allocated in locations that would enable a smooth transition from temporary to permanent facilities, should the BCT be permanently stationed at Fort Benning. Permanent basing of the BCT will be addressed in future environmental documentation when it is appropriate to make permanent stationing decisions.

1.2 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

This Environmental Assessment (EA) addresses the proposed action to provide temporary facilities necessary to support the temporary stationing of a new BCT at Fort Benning and to address the BCT training. The purpose of this proposed action is to support the Army's need to transition from a Division-based force to a Brigade-based force to better equip the Army to be successful on today's battlefield. As noted above, the decision to establish the temporary stationing of the BCT was addressed in the Transformation Programmatic EIS (U.S. Army 2002).

Fort Benning is located south of Columbus, Georgia (GA) and approximately 100 miles south-southwest of Atlanta (Figure 1-1). The Installation occupies approximately 184,000 acres of land of which roughly 172,400 acres are located in Georgia and 11,600 acres are located in Alabama. About 80 percent of the Installation is in Chattahoochee County, Georgia, but portions of the Installation are in Muscogee County and Marion County, Georgia, as well as Russell County, Alabama. Of Fort Benning's approximately 184,000 acres, more than 168,000 acres are allocated for training and approximately 12,500 acres are used for cantonment areas.

The ranges and training areas as well as some support services (such as family housing, Post Exchange, recreation centers, etc.) available in the existing cantonment area could be used by the BCT Soldiers. However, the Installation does not have adequate barracks, motor pools, vehicle maintenance facilities, storage units, and some of the other support facilities needed in reasonably close proximity to each other to provide for the needs associated with the new BCT.

Project Vicinity

Legend

DoD Property

Data Source:
Fort Benning
ESRI

Figure 1-1

The Army has decided to temporarily station the 5th Brigade of the 25th Infantry Division at Fort Benning (U.S. Army 2002). As such, temporary construction including modular support facilities are needed so that the Soldiers expected to arrive in Fall of 2005 will have sleeping quarters, dining facilities, personal vehicle parking areas, and all the other support facilities needed. If the 5th/25th is permanently stationed at Fort Benning, analysis to comply with the National Environmental Policy Act (NEPA) would be completed to address the environmental effect associated with permanent facilities.

1.3 SITING CRITERIA

An environmental planning charrette was conducted at Fort Benning to obtain input from numerous Installation organizations on the advantages and disadvantages of various possible locations for the support facilities that the BCT will need on both a temporary and potentially permanent basis. The planning process for accommodating a new BCT at Fort Benning began with identifying the criteria that should be considered in selecting a site for the support facilities. Planning was initiated for a Heavy Brigade, which requires more space than other types of brigades, because the type of BCT had not been identified at the time. The development footprint for a Heavy Brigade will accommodate a Light Infantry Brigade, such as the 5th Brigade of the 25th Division that will be temporarily stationed at Fort Benning. Therefore, this is the footprint that is used for the basis of analysis in this EA.

Siting criteria were established to help identify potential locations within the Installation that could best accommodate new BCT facilities and to help determine which of the locations is best suited. The types of siting criteria identified were size and configuration, operational/functional, cost, and environmental considerations. In applying the siting criteria to location selection, temporary BCT facilities were sited with the intention of reserving the best locations for potential future permanent facilities. The siting criteria were the same for both temporary and potential permanent facilities, although certain criteria (as noted in the descriptions below) were considered to be more important for potential permanent facilities than for temporary facilities. For more information regarding potential permanent facility locations, see Section 5.0, Cumulative Effects.

1.3.1 Size and Configuration

Sites considered needed to be large enough to accommodate the needed support facilities and without too many constraints that might force the BCT to function inefficiently. For example, centralized dining and recreational facilities provide the opportunity for Soldiers to walk from their barracks to these common areas. Providing parking areas between the barracks and work areas minimizes the need for multiple parking lots and minimizes the walking distance from parking lots to where Soldiers sleep and work. Size and configuration criteria included consideration of the following:

- *Approximately 225 acres without considering site constraints such as topography and drainage* – Anticipated facility needs for a BCT were identified in preliminary military construction documentation; based on the size of the needed facilities and accounting for force protection requirements and open space between facilities; it was estimated that approximately 225 acres would be needed to accommodate the support facilities for a BCT on the ideal site. Sites with constraints could require more space.

- *Relatively level* – Flat terrain minimizes site preparation (earthwork) costs, minimizes the need for complex drainage systems, and facilitates the installation of underground utilities.
- *Anti-terrorism/force protection* – Facilities must be sited in conformance with criteria cited in Uniform Facility Code (UFC) 4-010-01 to protect personnel and property. This code provides guidance on how far facilities should be located from access control points (security gates), roads and highways, and other features that may affect security.
- *Compact* – Sites that are linear or spread out are less efficient in keeping facilities with a functional relationship to one another grouped together. (This criterion is more important for potential permanent facilities than for temporary facilities.)
- *Centralized* – Like the criterion for a compact site, a site that allows for centralized parking, dining facilities, fitness center, recreation center, and computer or distance learning centers is more efficient in satisfying Soldier needs. (This criterion is more important for potential permanent facilities than for temporary facilities.)
- *Nearby brigade battalion headquarters* – Because brigade commanders and battalion commanders communicate on a regular basis, it is more efficient to have headquarters near the battalions.

1.3.2 Operational/Functional

The operational/function criterion regards the relationship of the BCT support facilities to other facilities on the Installation. An isolated location would not allow the BCT to effectively use the existing facilities and infrastructure established at Fort Benning. The following specific criteria were considered:

- *Internal Roads and Access*:
  - *Level of service* – the ability of a road or highway to accommodate an additional volume of traffic.
  - *Access to ranges and training areas* – where Soldiers complete their training.
  - *Access to railhead and Lawson Army Airfield* – to facilitate shipping supplies and equipment and to facilitate deployments.
  - *Access to hospital* – to provide emergency medical support for personnel.
- *Physical Proximity to*:
  - *Family housing* – to minimize commute distances for Soldiers who are accompanied by their families and live in family housing.
  - *Main Post and community facilities* – shopping, medical facilities, recreational facilities, restaurants, financial institutions, educational institutions, and other types of services. This criterion included consideration of the ability of off-post streets, roads, highways, and bridges to handle an increase in traffic, and the proximity to rail lines and airports for shipping goods and transporting personnel.
  - *Gates (access control points)* – to minimize driving time on the Installation for the off-post work force supporting the BCT (such as contractors, delivery trucks, etc.).

1.3.3 Costs

Minimizing cost is an important objective because budgets are limited. Costs can be minimized in several ways in planning a project and the following elements were considered the primary ways to reduce costs in the site selection process:

- *Capitalize on existing infrastructure* – areas in which access roads and utilities already exist provide savings by not having to develop these features. However, if utilities are undersized or in poor condition, they would likely need to be replaced or supplemented, which would not contribute to costs savings.
- *Minimize earthwork* – preparing a site for construction may include leveling terrain and removing obstructions such as large rocks and boulders. Rocky terrain adds to the expense of digging trenches for underground utilities and foundations. If a lot of earth moving is required and the soil and rocks cannot be redistributed on the site, then there is an additional cost for transporting and disposing of the waste material. Sites that minimize the need for earthwork also minimize costs.
- *Minimize mitigation requirements* – mitigation may be required to compensate for or offset environmental impacts. By avoiding adverse environmental impacts, the need for mitigation can be eliminated or reduced.
- *Minimize design and engineering requirements* – methods to minimize design and engineering costs include avoiding sites that drain water poorly, are inaccessible, or have soils that erode easily.

1.3.4 Environmental Considerations

Sites with the fewest environmental constraints are more likely to minimize costs, minimize construction delays, and reduce cumulative impacts. Existing environmental documentation and databases provide information that can be used to screen areas for their environmental sensitivity.

1.4 ENVIRONMENTAL COMPLIANCE AND DECISION TO BE MADE

Fort Benning is preparing this EA to identify, evaluate, and compare the potential environmental effects of constructing, using, and maintaining temporary support facilities for a new BCT and for the BCT to train using Fort Benning's existing ranges and training areas. The EA provides the environmental analysis needed for an informed decision on where to locate the support facilities. This EA is prepared in accordance with the NEPA; the Council on Environmental Quality (CEQ) regulations that implement NEPA; and Army Regulation (AR) 200-2, "Environmental Effects of Army Actions." NEPA is implemented by CEQ regulations contained in Title 40, Code of Federal Regulations (CFR), Parts 1500 to 1508. In general, the CEQ regulations require that prior to implementing any major action, the Federal agency must evaluate the proposal's potential environmental effect as well as notify and involve the public in the agency's decision-making process.

This EA identifies the potential environmental effects of the alternatives, and contains discussions of any mitigation and permit requirements, and findings and conclusions in accordance with NEPA. Such information provides the basis for the agency to determine whether to prepare an EIS or a Finding of No Significant Impact (FNSI).

The use of the term "significant" (and derivations thereof) in this EA is consistent with the definition and guidelines provided in the CEQ regulations (40 CFR 1508.27), which require consideration of both the context and intensity of impacts.

CHAPTER 2

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter describes the project alternatives being considered as well as those eliminated from detailed consideration.

2.1 ALTERNATIVE GEOGRAPHIC AREAS ELIMINATED FROM DETAILED CONSIDERATION

Fort Benning facility planning staff considered four broad geographic areas in which BCT facilities could potentially be located (Figure 2-1). Three of these were eliminated from detailed consideration, as discussed in this section. The fourth area, known as Harmony Church, was evaluated to be the most viable general location in which specific sites might be selected; this area is discussed in Section 2.2.

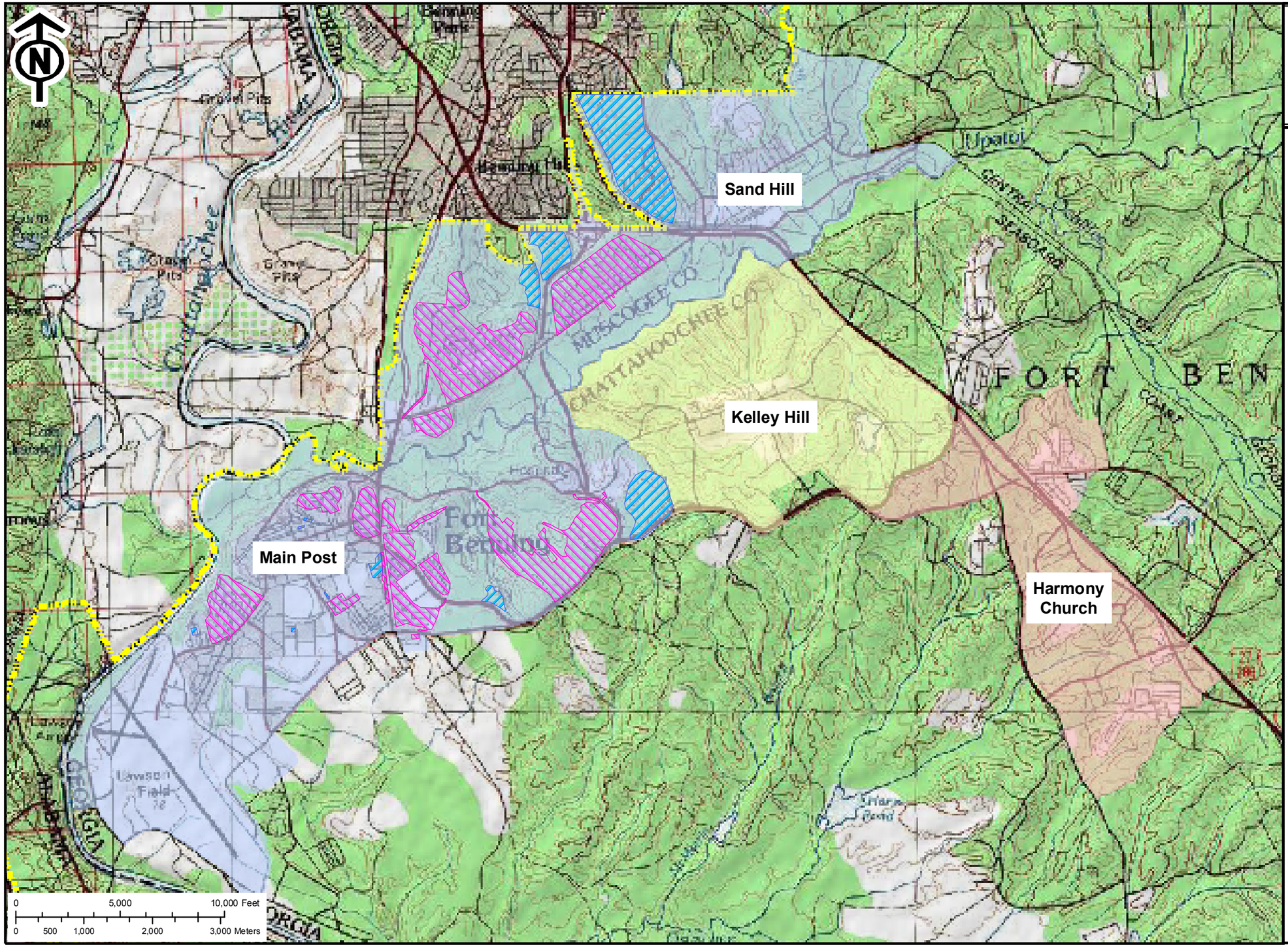
2.1.1 Residential Communities Initiative Sites

The Residential Communities Initiative (RCI) is a Department of the Army program in which a private entity assumes responsibility for family housing management, new construction, renovation, and maintenance. This initiative to privatize military housing incorporates the community standards and innovations found within civilian communities including amenities such as community centers, playgrounds, jogging and bike paths, and landscaping.

Many of the areas at Fort Benning that were viewed as suitable for RCI developments also met the siting criteria described above for the BCT. However, all sites evaluated for the RCI program were to be used for housing or other reserved purposes so this alternative for the BCT support facilities had to be eliminated from consideration.

2.1.2 Fort Benning, Alabama

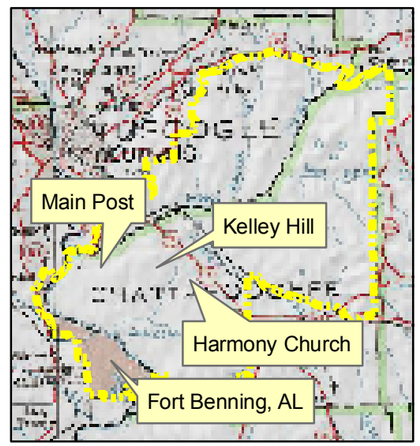
The southwestern tip of Fort Benning extends into Alabama (refer to Figure 1-1) and BCT sites here would be relatively close to Lawson Army Airfield. However, the Alabama portion of Fort Benning is far from the ranges, training areas, and the community support facilities of Main Post, and utilities in this area are limited. The Alabama portion of Fort Benning was eliminated from detailed consideration because it would be less effective and more costly to satisfy mission requirements here than at other viable locations.



Geographic Areas Considered

Legend

- DoD Property
- Existing RCI Site
- Potential RCI Site



Data Source:
Fort Benning
TOPO! © 2004 National Geographic

Figure 2-1

2.1.3 Kelley Hill

Kelley Hill, an area located 3 miles east of Main Post, is composed of high ground with relatively flat topography. It has recently been the site for development of a self-contained entity, housing the entire 3d Infantry Brigade of the 3d Infantry Division. The cantonment area is densely developed, but is surrounded by undeveloped land. The undeveloped areas were considered because of their close proximity to Main Post, ranges, training areas, access roads, and utilities.

However, many of the areas south of the Kelley Hill cantonment have already been identified for other Military Construction Army (MCA) projects and are not available for the BCT facilities. The terrain north of the cantonment area is steep and dissected by numerous drainages. Consequently, Kelly Hill was eliminated because of the excessive amount of time and money needed to prepare the available land for construction-related activities.

2.2 GEOGRAPHIC AREAS CONSIDERED

Harmony Church lies 5 miles southeast of Main Post and is generally located east and south of U.S. Highway 27. Harmony Church contains some semi-permanent barracks and support structures. Harmony Church was evaluated more favorably than the other three geographic locations for several reasons including:

- Adequately-sized areas available with relatively flat terrain,
- Existing utilities from past development,
- Appropriate development minimizes environmental disturbance of natural areas,
- Close to access control points (security gates),
- Good access to the community support facilities at Main Post, and
- Existing access roads of adequate capacity.

The Harmony Church area was subdivided into four smaller areas identified as East, North, Central, and South Harmony Church (Figure 2-2, Harmony Church Subdivisions). Each of the four subdivisions within Harmony Church was evaluated as being suitable for siting BCT support facilities. Primary strengths and weaknesses associated with each area were identified during the environmental planning charrette and are shown in Table 2-1 in no particular order of importance.

Potential problems that are common to each of the Harmony Church subdivisions include:

- Lack of a nearby emergency service facility,
- Inadequate communications facilities and/or capacity,
- Force protection concerns associated with proximity to Highway 27 and the Fort Benning Installation boundary, and
- Improvements likely needed to widen roadways and increase capacity at access control points (security gates).

Harmony Church Subdivisions

Legend

- Central Harmony Church
- East Harmony Church
- North Harmony Church
- South Harmony Church
- Harmony Church Subdivisions

MARNE RD
Kelley Hill
IVY RD
TANK TRAIL
Twilight Pond
CUSSETA RD
WOOD RD
East Harmony Church
North Harmony Church
JAMESTOWN RD
FIRST DIVISION RD
EIGHTH DIVISION RD
Central Harmony Church
Collins Training Center
Railroad
McKenna Airfield
Victory Pond
L'eyte Heliport
BABBIT RD
HOURGLASS RD
BRINSON RD
South Harmony Church
CROSBIE RD
GOOD LUCK RD
FUHRMAN RD
27
280

0 5,000 10,000 Feet
0 500 1,000 2,000 3,000 Meters

Data Source: Fort Benning

Figure 2-2

Table 2-1 Strengths and Weaknesses of Subdivisions within Harmony Church	
Strengths	***Weaknesses***
East Harmony Church	
Relatively flat terrain	No natural gas connectivity
Close to training areas	Within a prescribed burn area
Close to railhead	Potential conflicts with other uses such as kennel
Close to gate (access control point)	
Some usable utilities	
Largest blocks of acres without potential endangered species habitat of the four subdivisions	
North Harmony Church	
Established facilities could potentially be retrofitted for BCT uses	Too close to gate (access control point) – force protection concern
Good traffic access that can be expanded	Potential to impact endangered species
Minimal tree clearing necessary	More facilities to potentially relocate
Previously disturbed areas could be used	
Central Harmony Church	
Existing access road along perimeter	Potential to impact endangered species
Potential opportunity to use existing underground fuel storage tanks	Few previously cleared areas
South Harmony Church	
Extensive open space	Farthest of the four subdivisions from main travel arteries
Some existing road network for access	Access roads would need to be upgraded
Close to sewer plant pumping station and new communications facility	Farthest of the four subdivisions from emergency support facilities
Previously disturbed areas could be used	

Input received during the environmental planning charrette was considered as specific alternative concepts were developed to layout the BCT support facilities. This resulted in a blended use of the various subdivisions of the Harmony Church area. The East Harmony Church and North Harmony Church areas appeared to be generally more useful than the areas farther south, although the recommended alternatives also incorporate the use of portions of the Central and South Harmony Church areas. Numerous site development concepts were studied, but only those that were considered most compatible with other existing and planned land uses and best able to satisfy the majority of the siting criteria were developed into action alternatives to be considered in detail.

2.3 PROPOSED ACTION

Modular barracks like these would provide temporary living quarters for unaccompanied Soldiers

The proposed action is to develop, utilize, and maintain BCT support facilities to accommodate the temporary stationing of the BCT, and to have the BCT utilize existing ranges and training areas at Fort Benning. There is a short timeframe before temporary support facilities must be functional at Fort Benning. New Soldiers are expected to start arriving in Summer 2005 with the full Brigade in place by Fall 2005. Temporary facilities (consisting of austere, modular, and/or relocatable buildings) are required to address this temporary stationing action.

The BCT training consists mostly of infantry-type training, including urban terrain and urban assault training, and light maneuver land training. This training is necessary to prepare the BCT to be posted nearly anywhere in the world on short notice, in climates ranging from tropical jungle to sub-artic tundra. Additionally, they may face open land or dense, urbanized terrain.

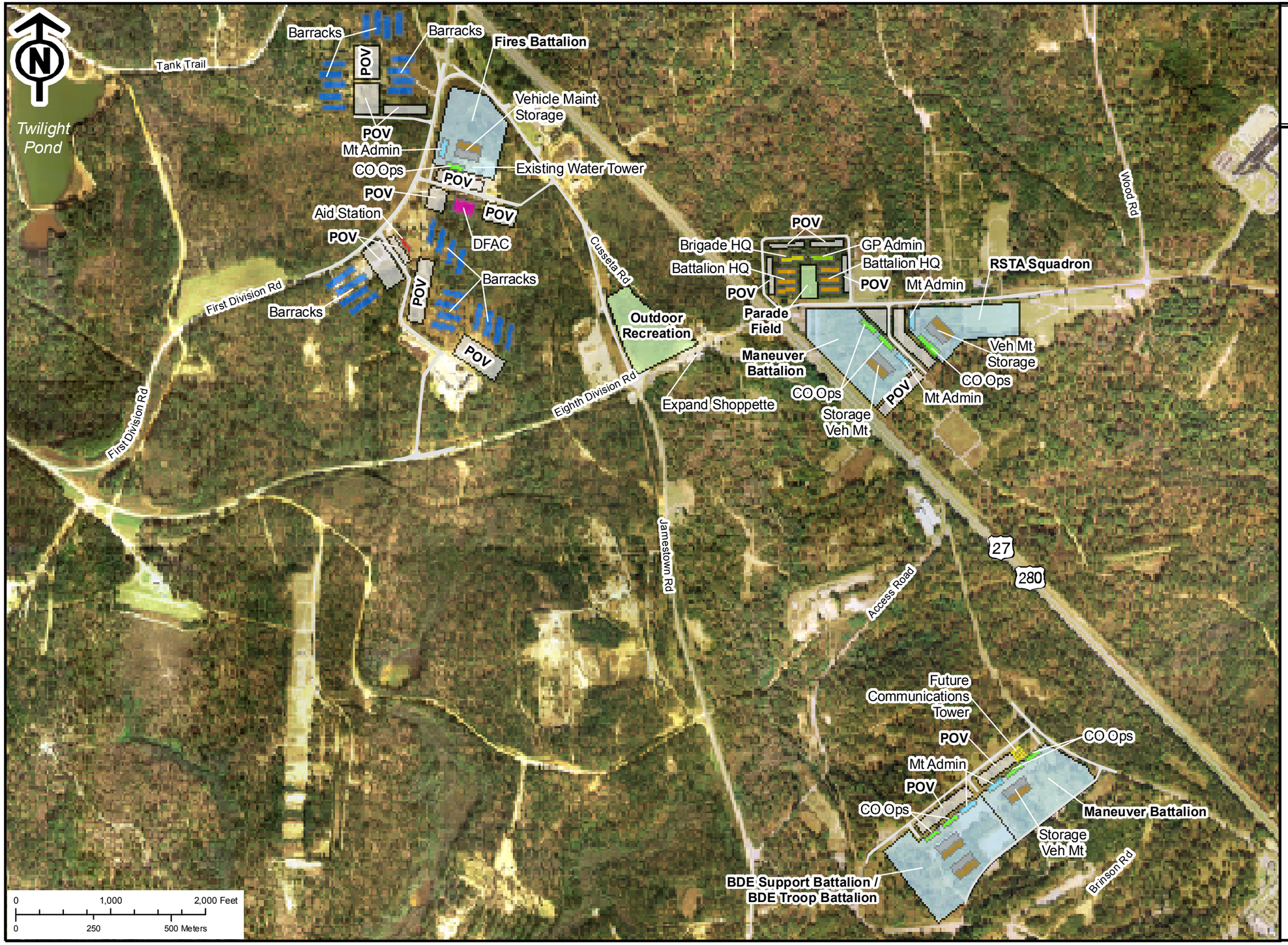
The BCT will train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning. These training and range areas are already heavily used; training requirements will be met by expanding the times in which training areas and ranges are scheduled and condensing the space allocated to allow more units to train concurrently within a given range or training area while satisfying safety requirements.

2.4 ALTERNATIVE I (PREFERRED ACTION)

Alternative I would locate the temporary support facilities in three clustered areas within the East, North, and Central Harmony Church subdivisions, as shown in Figure 2-3, Alternative I: Conceptual Layout of BCT Temporary Support Facilities. Following design and engineering, the actual layout may vary somewhat from the conceptual plan, but the approximately 247-acre area allocated for the facilities is expected to remain the same or possibly smaller. The modular buildings would likely start to be installed at Fort Benning beginning in Spring 2005 and the site development for the temporary buildings would continue through the arrival of the last of the BCT Soldiers.

Staging areas and access roads for construction-related activities would be within the area where facilities would be built to avoid unnecessary earth disturbance. Earthwork would be balanced within the construction area so that any soil moved from one area would be redistributed elsewhere within the site; if this cannot be accomplished, the construction contractor would be responsible for locating an authorized off-post borrow source or disposal area for soil that has received environmental clearance for those purposes. If a batch plant is necessary, it would be

Alternative I: Conceptual Layout of BCT Temporary Support Facilities



Legend

- Brigade
- Outdoor Recreation
- Personally Owned Vehicles (POV)
- Roads

Building Type

- Aid Station
- Barracks
- Battalion HQ
- Brigade HQ
- Company (CO) Ops
- Dining Facility (DFAC)
- Future Communications Tower
- General Purpose (GP) Admin
- Maintenance (MT) Admin
- Recreation Center
- Storage
- Vehicle Maintenance

Data Source: Fort Benning

Figure 2-3

located within areas that would be disturbed for the support facilities or located off Post; environmental requirements would be satisfied.

As shown in Figure 2-3, there would be facilities to support a fires Battalion; two maneuver Battalions; a combined Brigade support/troops Battalion; and a reconnaissance, surveillance, and target acquisition (RSTA) squadron. Each of these would include space for privately owned vehicle (POV) parking, vehicle maintenance, unit storage, Company operations, and administration. There would be modular barracks with nearly 1,500 units; Soldiers accompanied by family members would typically live in on-post family housing or off-post residences. The temporary facilities also would include an aid station, battalion headquarters/general purpose (GP) administration, Brigade Headquarters, a dining facility (DFAC), a recreation center, and space for outdoor recreation.

Some utility infrastructure exists within the area where temporary support facilities would be established. Existing infrastructure with the capacity and structural integrity to adequately serve the facilities may be reused, but new utilities lines still would be required. Utilities lines would be buried and would be within the perimeter of the area that may be subject to disturbance from site preparation and construction associated with the support facilities. Any ground disturbance that may be necessary to connect to utility main lines outside of the construction area would be confined to previously disturbed ground and generally parallel to roadways.

There are also two World War II ear buildings (numbers 4023 and 4024) within the existing Department of Defense Dependent Schools (DODDS) compound that would be demolished. Additionally, one World War II era building (number 4051) in the proposed northwest Modular Barracks space would be demolished.

In the South Harmony Church area where the Brigade Support Battalion/Troop Battalion and Maneuver Battalion are proposed (see Figure 2-3), World War II era building 4449 would be demolished. Buildings 4345 and 4476 would either be reused by the BCT or demolished. These buildings are also from the World War II era.

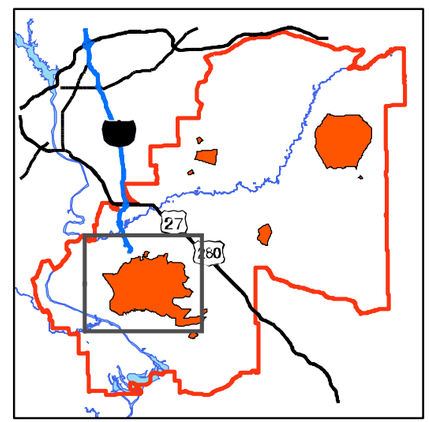
Alternative I also includes the training that would be conducted by the BCT. BCT training would consist mostly of infantry-type training. At Fort Benning, infantry training involves "basic" training where the foot-soldier learns the techniques and regiment of basic soldiering, including weaponry, fighting skills, tactics, and discipline. Advanced infantry training includes preparing Soldiers for the various types of infantry, such as mechanized (tanks and Bradley Fighting Vehicles), light (Stryker vehicles, foot-soldier platoons), airborne (paratroopers), air assault (gunships), and rangers (specialists). Collectively, they comprise the "power projection platform" of the Army that is ready to be deployed anywhere in the world on short notice.

Training would occur at Fort Benning's existing ranges and training areas. The types of ranges used and the estimated average increase in use resulting from BCT training compared to current use of the ranges is shown in Table 2-2; these training ranges are shown in Figures 2-4 through 2-6.

Training Areas and Military Ranges in the Dixie Road Range Complex Area

Legend

- Installation Area Boundary
- Streams
- Exclusion Area
- Interstate Highway
- State Highway
- Paved Road
- Unpaved Road
- Trail
- Training Sub Area
- Military Range
- Ranges to be Potentially Used by BCT
- Lakes and Ponds
- Cantonment Area
- Dudded Impact Area



0 1,000 2,000 3,000 4,000 Feet
0 250 500 1,000 Meters

Figure 2-4

Training Areas and Military Ranges in the Malone Range Complex Area

Legend

- Streams
- Exclusion Area
- Paved Road
- Unpaved Road
- Trail
- Training Sub Area
- Lakes and Ponds
- Military Range
- Ranges to be Potentially Used by BCT
- Dudded Impact Area

M7 M8 O14 O13 O12 TERRY K16 M1 M2 M6 L1 L2 L3 D1 J7 L4 D14 L5 L6 D13 J6 M5 M4 M3 J3 J4 J5 D12 J1 P1

BUENA VISTA RD
YOUNG
GOODBLOOD
RED ARROW RD
2ND ARMORED DIVISION RD

21 22 26 27 18 17 16 15 14 12 11 9 7 5 4 3 2 8

0 1,000 2,000 3,000 4,000 Feet
0 250 500 1,000 Meters

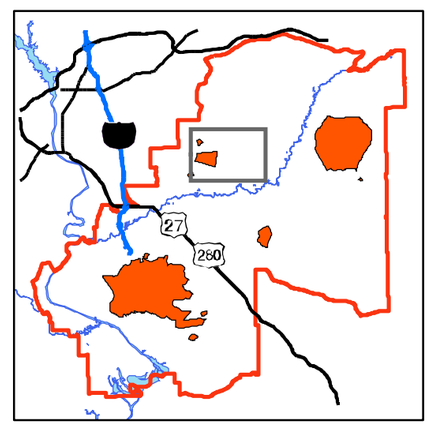


Figure 2-5

Training Areas in the CACTUS Area

Legend

- Artillery Firing Point
- Mortar Firing Point
- Installation Area Boundary
- Streams
- Paved Road
- Unpaved Road
- Trail
- Exclusion Area
- Training Sub Area
- Dudded Impact Area

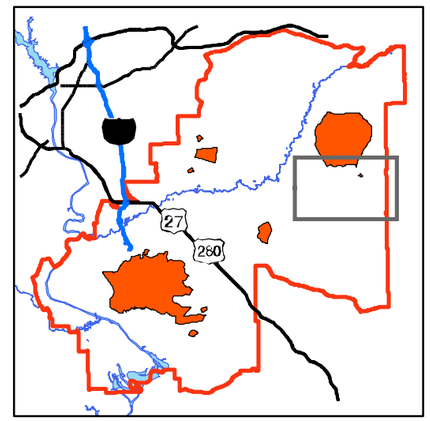


Figure 2-6

Table 2-2 Estimated Average Increase In Range Usage With 5th/25th BCT	
Type of Range or Training Area (or name)	***Average Increase in Use***
Basic Rifle Marksmanship	Less than 5% to 8%
Light Machine Gun	Less than 5% to 8%
Heavy Machine Gun	Less than 5% to 10%
Anti-tank weapons	Less than 8%
Zero Surface Danger Zone Shoothouse	15%
Squad Battle Course	27%
Multipurpose Training Range/Multipurpose Range Complex	22-28%
Light and Heavy Demolitions (normally at Terry, Cactus, Combined Live Fire Exercise Area and Digital Multi-Purpose Range Complex)	Less than 40%
Artillery (18 Towed 105 Howitzers)	50%

Source: Weekley 2004

2.5 ALTERNATIVE II

Alternative II would develop temporary support facilities for the BCT within the East Harmony Church area, as shown in Figure 2-7, Alternative II: Conceptual Layout of BCT Temporary Support Facilities. The facilities would be in temporary or relocatable modular buildings and would include the same types of facilities as described in Alternative I. Following design and engineering, the actual layout may vary somewhat from the conceptual plan, but the approximately 238-acre area allocated for the facilities is expected to remain the same or possibly smaller. Like Alternative I, establishment of the temporary facilities would likely begin in Spring 2005 and continue through the arrival of the last of the BCT Soldiers.

As described for Alternative I, existing utility infrastructure may be reused, but new infrastructure also would be required. Ground disturbance for utility installation would be confined to the area proposed for the support facilities for Alternative II or would be within previously disturbed rights-of-way to connect to utility mains.

With Alternative II, two existing land uses would need to be relocated; the Military Police Academy dog kennel located east of Highway 27 and north of 8th Division Road, and a Bradley (tank) driver's training course is located along the south side of 8th Division Road. While no specific relocation site has been identified for the dog kennel, there are numerous suitable locations in previously disturbed areas that could accommodate it; the location selected will be determined by the Military Police Academy personnel in coordination with the Garrison Commander. This Bradley driver's training course would be moved to Suitor Hill where a larger version of the same type of course already exists.

The 29th Infantry Regiment facilities, shown on Figure 2-7 as a proposed future use in the area, are described in Section 5.0, Cumulative Effects.

Alternative II: Conceptual Layout of BCT Temporary Support Facilities

Legend

- Drainage
- 1482 Modular Barracks Spaces
- Battalion
- Forward Support Battalion
- Outdoor Recreation
- Personally Owned Vehicles (POV)
- Roads

Building Type

- Aid Station
- Battalion HQ
- Brigade HQ
- Company (CO) Operations
- Dining Facility (DFAC)
- Future Barracks
- General Purpose (GP) Admin
- Maintenance (MT) Admin
- Recreation Building
- Storage
- Unit Operations
- Vehicle Maintenance

Data Source: Fort Benning

Figure 2-7

2.6 ALTERNATIVE III (NO ACTION)

With Alternative III, no support facilities would be constructed for the newly arriving troops that will comprise the 5th/25th BCT. While this alternative must be considered in accordance with the CEQ regulations implementing NEPA to establish the baseline environmental condition, this alternative is not a viable alternative because the 5th/25th would still be temporarily stationed at Fort Benning and taking no action does not satisfy the purpose and need to establish the temporary facilities needed by the BCT.

To house unaccompanied Soldiers, Alternative III would involve leasing hotels in communities around Fort Benning and/or renting apartments or houses off-post. Administrative and maintenance duties would have to be performed in existing facilities or off-post leased properties. According to the Greater Columbus Chamber of Commerce, approximately 3,000 total hotel or motel rooms exist in the Columbus, Georgia - Alabama, Metropolitan Statistical Area (MSA), which consists of Muscogee, Harris, Marion, and Chattahoochee Counties in Georgia and Russell County in Alabama (Hadden 2004).

Assuming that 47 percent of the Soldiers are unaccompanied and two Soldiers shared a hotel room, the cost to accommodate the unaccompanied Soldiers in motels would be in excess of approximately $55,000.00 per day. Actual costs would likely be higher because only about 10 percent of hotel rooms (about 300 rooms) can generally be blocked for long-term occupation at the lower end rates of an estimated $69 per day (Hadden 2004). Approximately 800 rooms would be needed so about 500 rooms may cost more if they are even available. For the community to support long-term leasing of more than 10 percent of the hotel rooms, rooms currently used by visiting Soldier family members and other travelers would have to be taken out of inventory.

In addition, apartment vacancy in the area current is at about 5 percent, which equates to between 100 and 150 apartment units, although 1,665 multi-family units are currently under construction in anticipation of expansion of the military population. Apartment costs vary depending on the number of bedrooms and the total square footage, but generally range from approximately $600 to $1,400 per month (Hadden 2004).

The BCT would still be required to train using existing ranges and training areas at Fort Benning. Training with the no-action alternative would be the same as that described for Alternative I.

CHAPTER 3

AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This chapter provides a description of the existing conditions of the area potentially affected by the proposed action and no-action alternative. Potential impacts from the proposed action (Alternatives I or II) may result from construction and operation of the new BCT facilities. As described in Section 4.0, environmental effects may also occur from BCT training, although these effects would be dispersed and consistent with the ongoing operations that are being conducted in the ranges and training areas. Because of the difference in the degree of potential effects, the description of the affected environment focuses more heavily on the portion of Harmony Church that may be used for temporary support facilities.

The proposed temporary support facilities could directly affect approximately 247 acres (refer to Figure 2-3) with Alternative I or approximately 238 acres (refer to Figure 2-7) with Alternative II. These impacts, primarily associated with ground disturbance for site preparation and construction of support facilities, are focused in the Harmony Church cantonment area of Fort Benning. For most resources, the affected environment focuses on these areas. For some resources, such as transportation and socioeconomics, in which commuter traffic and housing for accompanied Soldiers would occur outside of the Harmony Church area, the affected environment includes a larger area that includes the counties in the immediate vicinity of Fort Benning.

Resources Analyzed

Table 3-1 presents the results of the process of identifying resources to be analyzed in this EA. The natural environment section describes current conditions for soils, water quality, and biological resources, which includes information on wildlife, vegetation, and protected species. The human environment includes land use, recreational resources, socioeconomics (including environmental justice), cultural resources, transportation, utilities, hazardous materials and waste, public health and safety, air quality, and noise. Each of these major sections is separated into specific resources that have the potential to be affected by the proposed action.

Resources Eliminated from Further Analysis

The Army evaluated the resources listed above for their potential to be affected by the proposed action (Alternatives I or II) and the no-action alternative (III). In accordance with CEQ regulations, this evaluation determined four resources did not warrant further examination in the EA. The following provides the rationale for this approach and those resources.

Physiographic Characteristics. While some earthwork is anticipated for site preparation, the modifications would be localized and too minor to influence physiographic characteristics such as landforms, vegetative communities, or drainage patterns. Therefore, physiographic characteristics were eliminated from further analysis.

Table 3-1 Resources Assessed in the Environmental Analysis				
	Potentially Affected by BCT		***Analyzed in this EA***	
Categories/Resources	*Construction*	*Operations*	*Yes*	*No*
Natural Environment				
Soils	Yes	Yes	✓	
Water Quality	Yes	Yes	✓	
Biological Resources	Yes	Yes	✓	
Physiographic Characteristics	No	No		✓
Human Environment				
Land Use	Yes	Yes	✓	
Recreation	Yes	Yes	✓	
Socioeconomics (including Environmental Justice)	Yes	Yes	✓	
Cultural Resources	Yes	Yes	✓	
Transportation	Yes	Yes	✓	
Utilities	Yes	Yes	✓	
Hazardous Materials and Waste	Yes	Yes	✓	
Public Health and Safety	Yes	Yes	✓	
Air Quality	Yes	Yes	✓	
Noise	Yes	Yes	✓	
Protection of Children	No	No		✓
Provision for the Handicapped	No	No		✓
Visual Resources	No	No		✓

Protection of Children. Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* requires each Federal agency to identify and assess environmental health and safety risks that may disproportionately affect children and pose a disproportionate environmental health or safety risk to children. Neither of the action alternatives would affect children because the facilities would be built and BCT training would occur in portions of the Installation where no schools or residential homes are located. Therefore, protection of children was not evaluated further in this EA.

Provision for the Handicapped. American Disabilities Act (ADA) requires access be provided for the handicapped. Construction of the facilities would conform with this Act and any Army regulations associated with its enforcement.

Visual Resources. The proposed BCT support facilities would be located within an established cantonment area within the Installation that has historically supported facilities and military training, and would not pose any visual conflicts with the surrounding landscape. Therefore, the proposed action is not expected to impact the visual environment of the Installation or its surrounding area or require further analysis.

3.1 NATURAL ENVIRONMENT

3.1.1 Soils

The principal factors influencing stability of structures are soil and seismic properties. Soil, in general, refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support structures and facilities. Relative to development, soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use.

Soils in the Harmony Church area of Fort Benning are predominantly clayey and range from acid to alkaline in reaction. The topography is generally smooth to gently rolling with low relief (USDA 1997). Topography within the Alternative I and II BCT support facility sites is included in Figure 3-1. Most of Fort Benning's soils are identified as highly erodible, the degree of which is determined by factors including texture, structure, percent slope, drainage, and permeability (U.S. Army 2001a).

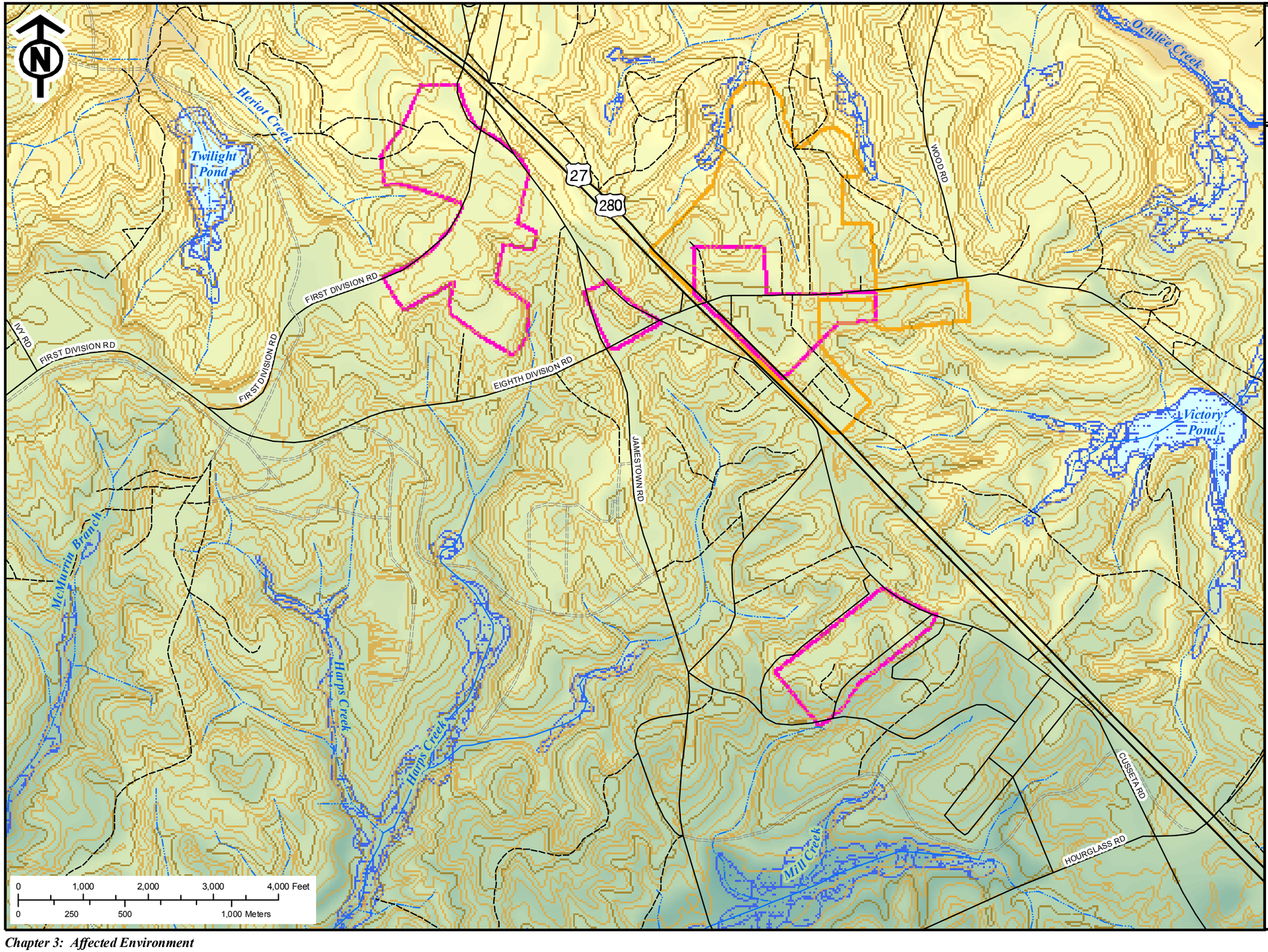
3.1.2 Water quality

Water quality focuses on surface and ground water quality within the Alternative I, II, and III sites and training areas and ranges that would be utilized. The Clean Water Act (CWA) of 1972 is the primary Federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the nation's waters. Jurisdictional waters of the U.S. are regulated resources and are subject to Federal authority under Section 404 of the CWA. This term is broadly defined to include navigable waters (including intermittent streams), impoundments, tributary streams, and wetlands.

Surface Water Quality

The primary watercourse at Fort Benning, and boundary line between Georgia and Alabama, is the Chattahoochee River. The Chattahoochee flows in a southerly direction and contains numerous oxbows, abandoned meander channels, isolated ponds, and wetland areas. On the Georgia side, most streams drain into the Chattahoochee through the eastward flowing Upatoi Creek, which serves as the main drainage basin for other streams and tributaries at Fort Benning. Upatoi Creek also serves as the source of surface water withdrawal for drinking, residential, commercial, and other uses on Fort Benning. The northwest portion of the Installation drains into Bull Creek and the most southern portion drains directly into the Chattahoochee River.

Topography and Major Surface Water Features



Legend

- State Highway
- Paved Road
- Unpaved Road
- Trail
- Major Stream
- Minor Stream
- Wetlands
- Lakes and Ponds

Elevation Contour Interval

- 50-ft
- 10-ft

Project Area

- Alternative I
- Alternative II

Figure 3-1

Within vicinity of Alternatives I and II construction sites, major surface water drainages include Heriot Creek, Ochillee Creek, Victory Pond, McMurrin Branch, Harps Creek, Mill Creek, and associated unnamed tributaries. The area northwest of Highway 27/280 and First Division Road drains to the northwest via Heriot Creek, a tributary of Upatoi Creek. Farther upstream, the Ochillee Creek tributary enters Upatoi Creek. Generally, areas east of Highway 27/280 drain to Ochillee Creek either directly, or via Victory Pond to the south. The area between First Division Road, Eighth Division Road, and Cusseta Road on the west side of Highway 27/280 drains southwest to McMurrin Branch and Harps Creek, tributaries of Oswichee Creek which flows to the Chattahoochee River. The area farthest south within the Alternative I site to the west of Highway 27/280 drains to Harps and Mill Creeks, tributaries of Oswichee Creek.

Wetlands

The National Wetlands Inventory conducted by the U. S. Fish and Wildlife Service (USFWS 1982) shows that Fort Benning contains about 16,926 acres of wetlands. The inventory described lacustrine, riverine, and palustrine systems. On Fort Benning wetlands include impounded water, flowing water, river floodplains, stream floodplains, small stream swamps, wooded seepage bogs, herbaceous and shrub seepage bogs, and gum/oak ponds. According to this broad inventory, Alternatives I and II construction sites contain no wetlands. Two wetlands occur north and adjacent to Alternative I (see Figure 3-1).

Ground Water Quality

The state of Georgia possesses some of the largest and purest ground water aquifers in the world. Fort Benning is in the Coastal Plain hydrologic province of Georgia and Alabama, whose principal ground water source is the Cretaceous aquifer system. The aquifer systems are directly related to the various geologic formations. The Georgia Geologic Survey identifies these Cretaceous aquifers in the Fort Benning area as the A-3 through A-6 aquifers. The recharge area for these aquifers is the Sand Hills area, which includes Fort Benning (Georgia Department of Natural Resources [DNR] 1986). Seven drinking-water supply wells are found on Fort Benning. No existing wells occur within the Alternative I and II sites.

Impaired Streams and Total Maximum Daily Loads

For the Chattahoochee River Basin, the State of Georgia has identified 31 stream segments as "water quality limited" [CWA, Section 303(d)] or impaired due to sedimentation and 79 stream segments as water quality limited due to fecal coliform. Of these, six segments are within Fort Benning, with five listed for sediment (primarily tributaries of Upatoi Creek, including Pine Knot and Little Pine Knot Creeks, and tributaries of the Chattahoochee River) and one for fecal coliform (the Chattahoochee River from Upatoi Creek to the railroad at Omaha, Georgia). None of these stream segments are within the Alternative I or II sites for the proposed BCT support facilities.

None of the ranges and training areas that would be utilized by the new BCT are directly adjacent to TMDL streams. However, they are located within drainages of the TMDL streams. The training areas and ranges within the Malone Range Complex (depicted in Figure 2-5) are located

north of Upatoi Creek. The closest distance between these range boundaries and Upatoi Creek is approximately one-quarter mile, and some streams that go through the ranges drain directly to Upatoi Creek. Within the CACTUS Area (Figure 2-6), Little Pine Knot Creek flows north into the K15 Dudded Impact Area, where it connects with Pine Knot Creek flowing west. Mortar firing point 203, depicted on Figure 2-6, sits just north of Pine Knot Creek. The ranges and training areas depicted on Figure 2-4, within the Dixie Road Range Complex, eventually drain to the Chattahoochee River south of Upatoi Creek, although they are at least one and a half miles distant at the closest point.

Although no "allowable" level has been established for TMDL pollutants on Installation waterways, Fort Benning applies management practices, as defined in the GA DNR guidance for TMDLs (GADNR 2002a, 2002b), throughout the Installation to limit sedimentation into any stream including:

- Implementing an Erosion Sedimentation Pollution Control Plan (ESPCP) for land disturbing activities to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) permit program,
- Using Georgia Forestry Commission Best Management Practices for timber harvests,
- Adopting Natural Resources Conservation Service conservation practices,
- Adhering to the Mined Land Use Plan prepared as part of the Surface Mining Permit Application,
- Adopting proper unpaved road maintenance practices, and
- Repairing and preventing stream bank erosion due to increased stream flow velocities caused by urban runoff (DNR, 2002a, 2002b).

Fort Benning has two permitted point sources (wastewater treatment plants permitted to and owned by Columbus Water Works) that discharge to the Chattahoochee River, as well as a general storm water permit. Combined point and non-point source fecal coliform releases originating from sources located upstream from the Installation are also contributors for fecal coliform in the Fort Benning section of the Chattahoochee River. There have been several reported releases in the vicinity of the Alternative I and II sites within the last 3 years. Sewage infrastructure would need to be upgraded in order to reduce the potential for additional releases in this area (personal communication, Wilkins 2004). As long as Columbus Water Works maintains its discharges below the fecal coliform waste load allocation established by the Georgia DNR via the wastewater treatment plant permits, it is not required to reduce its discharge into the Chattahoochee River and is in compliance with the TMDL program (DNR 2002b).

Storm Water

Storm water at Fort Benning is regulated under the Installation's general storm water NPDES permit. Storm water discharges in the Main Post drain directly into the Chattahoochee River through a storm drain system. Other storm water on the Installation, including within the Alternative I and Alternative II sites, drains via culverts, ditches, swales, natural seepage, and overland flow. Storm water from the satellite cantonment of Harmony Church drains into nearby surface water bodies. Harmony Church, east of Victory Drive, drains into Mill Creek and Harps Pond.

3.1.3 Biological Resources

Biological resources include native or naturalized plants and animals and the habitats in which they occur. The Fort Benning Integrated Natural Resources Management Plan (INRMP) (U.S. Army 2001a) provides a comprehensive overview of the status of biological resources throughout the Installation. For purposes of this EA, discussions of resources present in areas that would be affected by implementation of the proposed action at either of the alternative construction sites are provided below for (1) vegetation and wildlife, including migratory birds; and (2) threatened, endangered, and other special status species. No unique ecological areas (described in U.S. Army 2001a) are present in the vicinity of construction of BCT facilities of those alternative sites.

The proposed action includes the use of existing ranges, training areas, and other existing infrastructure on Fort Benning. Installation-wide conditions relevant to this aspect of the proposed action are described in the INRMP (U.S. Army 2001a) and in the recent DMPRC EIS (U.S. Army 2004). The associated impacts are considered in Chapter 4.

Vegetation and Wildlife

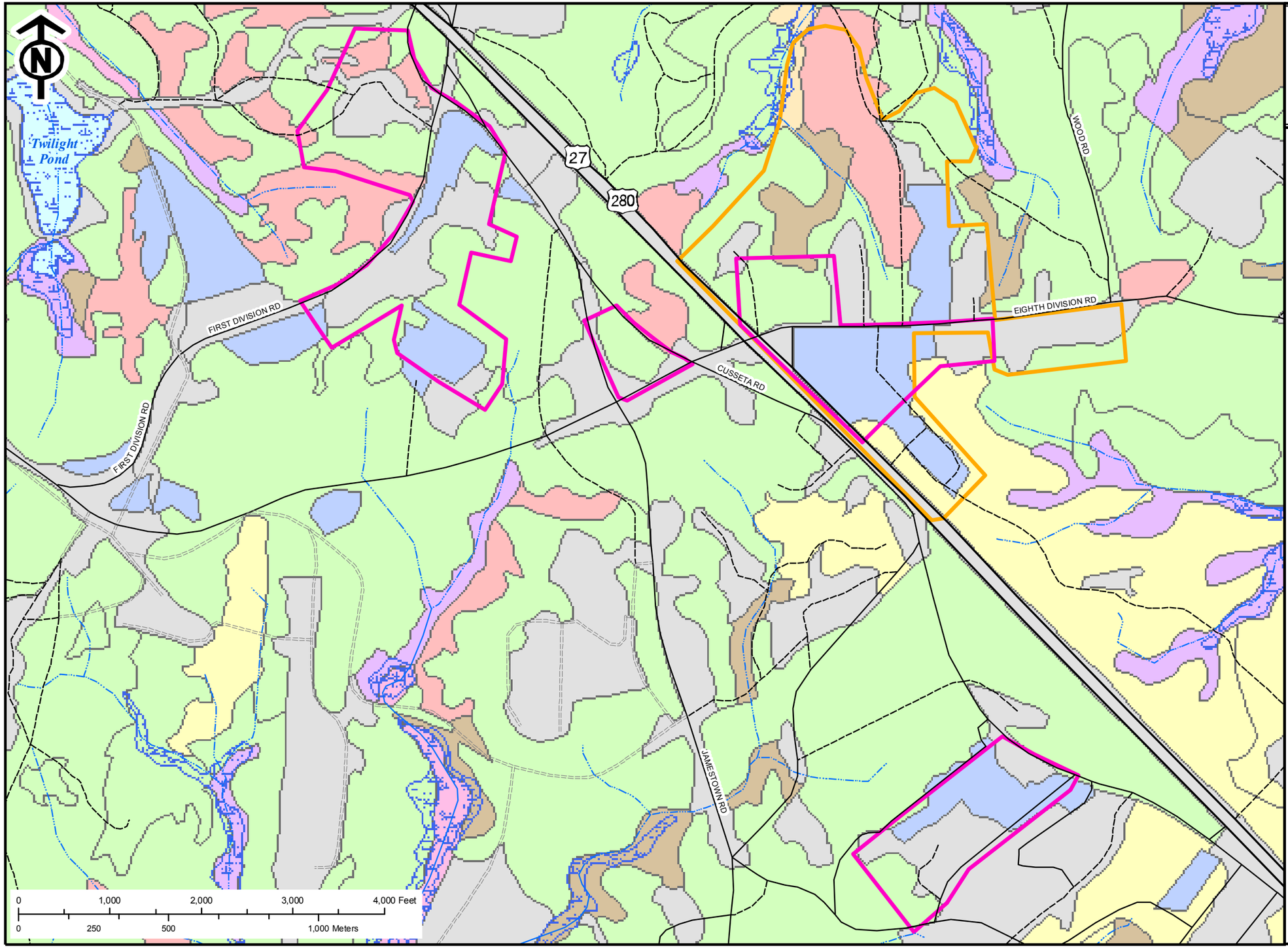
Vegetation. On Fort Benning, plant and animal communities in both terrestrial and aquatic habitats have been classified into 13 ecological groups (U.S. Army 2001a). Ecological groups provide a framework for managing species and habitats of concern on the Installation. Ecological groups are the top level of a hierarchy that includes, at finer scales of differentiation, vegetation alliances, and associations that are structurally and functionally similar.

Figure 3-2 shows the mapping of ecological groups in and around each of the alternative sites. Table 3-2 provides the acreage of each group within the two alternative construction site boundaries. Following are summary descriptions of each ecological group. More detailed accounts of these ecological groups and others that occur elsewhere on the Installation (e.g., training areas and ranges) are provided in the INRMP (U.S. Army 2001a).

Table 3-2 Acreages of Ecological Groups at the Alternative Sites

Ecological Group	***Acres Present***	
	Alternative I	*Alternative II*
Longleaf Pine plantations	69	50
Other altered areas	85	51
Longleaf pine sandhills	76	72
Dry-mesic hardwood and dry-mesic mixed hardwood/pine forests	13	34
Successional upland deciduous or mixed forests	1	16
Longleaf pine loamhills	3	12
Herbaceous and shrub seepage bogs	0	4
Small stream swamps and wooded seepage bogs	0	<1
Total	247	239

Source: Fort Benning GIS, 2004



Ecological Groups

Legend

- State Highway
- Paved Road
- Unpaved Road
- Trail
- Major Stream
- Minor Stream

Ecological Groups

- Dry-mesic and dry-mesic mixed hardwood / pine forests
- Herbaceous and shrub seepage bogs
- Longleaf pine loamhills
- Longleaf pine sandhills
- Open water
- Other altered areas
- Plantations
- Small stream swamps and wooded seepage bogs
- Stream floodplains
- Successional upland deciduous or mixed forests

Project Area

- Alternative I
- Alternative II

Figure 3-2

Longleaf Pine plantations and other altered areas account for the largest acreage on both alternative sites (62 and 42 percent of total acres with Alternative I and II, respectively). Pine plantations, consisting of planted loblolly and slash pine (*Pinus taeda* and *P. elliottii*, respectively), have been subject to harvesting but at present are increasingly being restored to native habitat (U.S. Army 2001a). Other altered areas include developed and highly disturbed land, as well as shrub and grassy areas that are a result of range construction and maintenance activities (U.S. Army 2001a).

At both sites, the most prevalent natural group, amounting to roughly a third (72 to 76 acres) of the area of each alternative site, is longleaf pine (*Pinus palustris*) sandhills, characterized by relatively open stands of longleaf pine, frequently with an understory of scrub oak (*Quercus* spp.), on sandy soils. In addition to regionally common wildlife, this habitat supports red-cockaded woodpeckers (*Picoides borealis*), gopher tortoises (*Gopherus polyphemus*), and other species of concern (U.S. Army 2001a).

Dry-mesic hardwood and dry-mesic mixed hardwood/pine forest communities occur on 13 acres of Alternative I and 34 acres of Alternative II. Similar to these communities but occurring on disturbed sites are successional upland deciduous or mixed forests, which are found on about 1 acre of Alternative I and 16 acres of Alternative II (Table 3-2 and Figure 3-2). These forests are quite variable on the Installation and occur in the ecotone between the dry ridge tops and the mesic bottoms. Common tree species found in these areas include loblolly and shortleaf pine (*Pinus echinata*), various oaks (*Quercus* spp.) and other hardwoods, along with a diverse shrub understory (U.S. Army 2001a).

Longleaf pine loamhills include some of the best remaining longleaf pine stands on the Installation, which occur intermixed with loblolly and shortleaf pine on rich loamy soils. Diverse shrubs and herbaceous species occur in these communities, which support abundant wildlife including red-cockaded woodpecker. Alternative I includes approximately 3 acres, whereas Alternative II includes 12 acres of these forests.

About 4 acres of bogs and seeps occur within Alternative II, primarily in the northern part of the alternative site area. These localized habitats support distinctive plant and animal communities (U.S. Army 2001a).

Wildlife. Fort Benning supports at least 350 invertebrate, fish, and wildlife species (U.S. Army 2001a). From the standpoint of the proposed action, common wildlife expected to occur include white-tailed deer (*Odocoileus virginianus*), wild boar (*Sus scrofa*), foxes (*Felis* spp.), bobcat (*Lynx rufus*), rabbits (*Sylvilagus* spp.), squirrels (*Sciurus* spp.), and a variety of smaller mammals. In addition to a diverse assemblage of forest songbirds, wild turkey (*Meleagris gallopavo*),

bobwhite quail (*Colinus virginianus*), and several other species are important game birds on the Installation (see U.S. Army 2001a for more details).

There are approximately 150 species of birds protected under the Migratory Bird Treaty Act (MBTA) that occur on the Installation, either seasonally or year round, and many of these species are expected to occur at least temporarily on both the alternative sites. Fort Benning is complying with the MBTA by implementing Army Policy Guidance of 17 August 2001 and Executive Order 13186 (*Responsibilities of Federal Agencies to Migratory Bird Treaty Act*, 11 January 2001). Fort Benning manages and conserves migratory bird species through its INRMP and considers effects to migratory birds in any proposed action through the NEPA process (see U.S. Army 2001a for details).

Protected Species

Protected species include those that are listed or proposed for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS); and state-protected species listed as rare, threatened, or endangered by the Georgia Department of Natural Resources (GDNR). This section also considers non-protected species of federal or state concern. A complete listing of threatened, endangered, and other species of concern that occur on Fort Benning is provided in the INRMP (U.S. Army 2001a). A total of 57 such species occur on the Georgia side of the Installation. The only Federally-protected threatened or endangered species known to occur on the alternative sites is the endangered red-cockaded woodpecker (RCW), whereas the only state-protected species that is known or likely to occur is the gopher tortoise (*gopherus polyphemus)*, which is listed as threatened. The only other special-status species known to occur in the project area is the migrant loggerhead shrike (*Lanius ludovicianus migrans*), which is not protected but is a Georgia species of special concern. Occurrences of these species with respect to the alternative sites are shown on Figure 3-3. Each is discussed in more detail below.

Federally Protected Species

Red-cockaded woodpecker (Picoides borealis). RCWs have a social structure that involve a breeding pair and helpers that assist with cavity excavation and maintenance, egg incubation, feeding young, and defending the group's territory. Nesting generally occurs from April through June. Groups of RCWs nest in an aggregation of cavity trees called a cluster that is surrounded by contiguous foraging habitat. Discrete cluster sites are typically located where mature pine trees are more than 60 years old. Foraging habitat, however, is more variable with timber taking on increasing value as the stands age past 30 years. Both nesting and foraging habitat can be characterized as open stands of pine with a scarce to moderate midstory. As the midstory becomes dense or reaches the height of cavities, cluster abandonment and decreased foraging value results.

Threatened, Endangered, and Other Special Status Species

Legend

Threatened & Endangered Species

- RCW Active Cluster
- RCW Inactive Cluster
- Gopher Tortoise
- RCW Active Cluster Partitions
- RCW Forage Area

Other Special Status Species

- Migrant loggerhead shrike

Project Area

- Alternative I
- Alternative II

Twilight Pond
Tank Trail
R01-02R
27
280
Wood Rd
R02-01R
HCC-14R
First Division Rd
BB04-01R
HCC-11R
Eighth Division Rd
Cusseta Rd
HCC-03R
Access Road
HCC-01R
A07-01
HCC-10R
S01-01
Jamestown Rd
Babbit Rd
Brinson Rd

0 1,000 2,000 3,000 4,000 Feet
0 250 500 1,000 Meters

Figure 3-3

Fort Benning supports one of the largest RCW populations in the southeastern United States. The RCWs are well dispersed over the entire Installation, except that no active clusters are located on the Alabama portion. Intense efforts have been implemented to increase the endangered species staff at Fort Benning and to greatly enhance management activities for RCWs and their habitat on Fort Benning. On 27 September 2002, the USFWS approved Fort Benning's Endangered Species Management Plan (ESMP) for the RCW and issued a Biological Opinion that included specific management activities. This allowed the implementation of the "1996 Management Guidelines for the RCW on Army Installations." Fort Benning is also one of 13 primary core locations selected by the USFWS to manage for a RCW recovery population (451 clusters at Fort Benning). Presently, Fort Benning has a total of 295 manageable RCW clusters (249 active and 46 inactive, as of 2003). There is an additional estimate of 43 active and 1 inactive clusters in ordnance impact areas designated A20 and K15.

Management of the RCW and its habitat on Fort Benning is described in the INRMP (U.S. Army 2001a). This includes the protection and maintenance of existing habitat areas, and the expansion of nesting opportunities for the species in new areas on the Installation. Several active and inactive clusters occur near but not within the alternative site boundaries (refer to Figure 3-3). The extent of mapped RCW foraging habitat, which includes areas known to be or that could potentially be used for foraging, is also shown in Figure 3-3. This is a coarse-scale mapping and some unsuitable areas are inevitably overlapped. Figure 3-3 also shows the partitioning of foraging habitat among RCW clusters. For areas that may be subject to impact, a detailed "foraging analysis" was prepared by the Fort Benning RCW Biologist (M. Barron). That analysis involves an assessment of habitat quality within 0.5 mi and 0.25 mi, respectively, of the cluster center. The foraging analysis rates habitat quality as good, medium, low, poor, or very poor and determines the acreage of habitat in each category. A viable cluster should have at least 120 acres of good quality habitat within 0.5 mi of the cluster center, with 50 percent or more occurring within 0.25 mi, and be relatively free of hardwood encroachment.

State Protected Species

Gopher tortoise *(Gopherus polyphemus).* Gopher tortoise (Georgia - Threatened) burrows in the sandy soil habitats found in the northern two-thirds and southeastern tip of the Installation. The biology and management of this species are discussed in the INRMP (U.S. Army 2001a). Over 8,200 tortoise burrows have been documented to date on Fort Benning. The gopher tortoise is not known to occur on the Alternative II site, but several burrows have been found near the northern edge of Alternative I.

Migrant loggerhead shrike (*Lanius ludovicianus migrans*). The migrant loggerhead shrike is a Georgia special-concern bird species that nests in open woodlands and edge habitats. Two occurrences were been recorded within Alternative I by USFWS during surveys of Fort Benning in 1995 and 1997, respectively (Figure 3-3).

3.2 HUMAN ENVIRONMENT

3.2.1 Existing and Future Land Use

Land use often refers to human modification of land often for residential or economic purposes. The attributes of land use include general land use and ownership, special use land areas, and land management plans. Land uses are frequently regulated by management plans, policies, ordinances, and regulations that determine the types of uses that are allowable or to protect specially designated or environmentally sensitive uses. Special use land management areas that may be considered to be environmentally sensitive or worthy of specially designated status are generally more rigorously managed.

Fort Benning, covering 184,000 acres, is the site of training, administrative, and residential activities, as well as associated land management activities. It lies primarily within Muscogee and Chattahoochee Counties in Georgia, and also extends into Russell County, Alabama. Columbus, the second largest city in Georgia is found west and north of the Installation and has a consolidated government and boundaries with Muscogee County. Chattahoochee County to the south of Fort Benning supports predominantly agricultural and undeveloped vacant land used for farming, forestry, and military training on the lands within Fort Benning. Harris County, north of Columbus and Fort Benning, is sparsely populated but is growing rapidly as a suburb of Columbus. Marion and Talbot Counties to the east of Fort Benning are predominantly agricultural and undeveloped vacant land with low density residential, commercial, and public/institutional land use in a few small communities. Similar rural, agricultural lands uses dominate in Russell County, except for Phenix City immediately across the Chattahoochee River from Columbus.

Fort Benning is divided into numerous training compartments, ranges, impact zones, drop zones, exclusion areas, cantonment areas, and recreation areas. The cantonment and family housing areas of Fort Benning occupy about 8 percent of the Installation. There is also a 1,095-acre recreation area (0.6 percent of Installation) located along Uchee Creek on the western bank of the Chattahoochee River. Main Post, adjacent to the south Columbus area, is the largest and most developed of the cantonment areas, containing the Post Headquarters, Infantry School, and barracks complex known as the Cuartels. Main Post also includes Lawson Army Airfield (LAAF), Martin Army Community Hospital, the Post Exchange, the Commissary, and various family housing areas. Sand Hill, 4 miles northeast of Main Post, contains barracks, dining facilities, classrooms and other facilities for training. Kelley Hill, 3 miles east of Main Post, contains barracks and support facilities.

The Harmony Church area lies 5 miles southeast of Main Post and contains semi-permanent barracks and support structures. An active program for demolition of some of these structures is underway for land reclamation (forestry) and other uses, such as other major Army construction projects. The alternative construction sites lie within portions of designated training compartments AO Brown, R1, BB3, A7, EE1, and S1. All of these areas are managed for the types of uses that would occur under the proposed action.

Comprehensive and general plans, along with management plans for natural and cultural resources, document and guide land use at Fort Benning. Planning documents include the *2001-2005 Fort Benning Integrated Natural Resources Management Plan (INRMP)* (U.S. Army 2001a). The *Fort Benning Integrated Cultural Resources Management Plan (ICRMP)* is also being drafted. The INRMP ensures that natural resource conservation measures and military activities are integrated and consistent with Federal land stewardship requirements and serves as the comprehensive plan for deliberate management of natural resources. Likewise, the ICRMP will be a component of the Installation master plan and will be the Installation commander's decision document for cultural resources management actions and compliance procedures. It will integrate the entirety of the Installation cultural resources program with ongoing mission activities, identify potential conflicts between the Installation's mission and cultural resources management, and recommend compliance actions necessary to maintain the availability of mission-essential properties and acreage.

3.2.2 Recreational Resources

Recreation resources include outdoor recreational activities that take place away from participants' homes. Because the proposed action would take place at Fort Benning, recreation analysis will focus on recreational activities associated with the Installation including recreation programs, developed and undeveloped areas, parks, and waterways, as well as activities in surrounding communities. Recreationists at Fort Benning seek a variety of both urban and rural recreation opportunities with varying degrees of ease of access, undeveloped and developed areas and facilities, and an array of potential uses. For these reasons, the effects of existing use of areas at Fort Benning on a user's expectations were considered in assessing existing conditions. Typically, recreational use in an area can be described by the number of users, available activities, uniqueness of the area as a recreational resource, and the perceived value or benefit of the area for the users.

There are ample recreational opportunities for residents and visitors of Fort Benning and Columbus, Georgia, and the Phenix City, Alabama areas. Most recreation and leisure programs on Fort Benning are managed and administered by the Directorate of Morale, Welfare, and Recreation (MWR). The operation and maintenance of those facilities and areas are the responsibility of MWR and the Directorate of Public Works (DPW). Fort Benning's undeveloped lands used for recreation, commonly called open space, may include golf courses, natural or cultural resource preservation sites, or other similar recreational areas. Other recreational opportunities, such as bird-watching, hunting, and hiking, also occur on the Installation. Recreation within developed lands includes recreational and physical fitness facilities, child care programs, libraries, club activities, bowling, and other similar opportunities. The Alternative I and II sites are found on largely developed lands with limited recreational use.

Fort Benning's Pistol Club uses the site of the original field fire shooting range as a pistol firing range. This site is located within the Alternative I area. With Alternative I, this range would be changed into a Modified Record Fire Range. Also, the pistol club would relocate to a designated special use space near Simpson Range. This area is already used as a firing range and would provide the club with the same capacity and availability as the original.

Hunting is permitted Installation-wide except in restricted areas and designated training areas. Restricted areas include cantonment areas such as Harmony Church and Kelley Hill, DoD areas, and ranges and facilities marked as restricted or exclusion areas. Hunting on Fort Benning is regulated and coordinated with the schedule of field training exercise in the training compartments. The areas open for hunting on a given day are determined by the amount of military training, range maintenance, and land management activities occurring in the training compartments. Only 32 percent of Fort Benning's 140,000 acres of hunting land was available to hunters during the Spring and Fall 2004 seasons (personal communication, Weekley 2004). There were approximately 2,500 registered hunters in Fall 2004.

3.2.3 Socioeconomics

Socioeconomics for this EA focus on the general features of the local economy that could be affected by the proposed action or alternatives. The affected environment for this analysis includes Fort Benning and surrounding communities in Georgia and Alabama. Socioeconomics comprise the basic attributes of population and economic activity within an affected environment and typically encompasses population, employment, income, housing, and taxes.

Population

The Columbus, Georgia - Alabama, Metropolitan Statistical Area (Columbus MSA), which consists of Muscogee, Harris, Marion, and Chattahoochee Counties, Georgia and Russell County, Alabama, encompasses approximately 4,125 square miles. The majority of the social and economic effects of Fort Benning are felt in the Columbus MSA where the majority of the population resides, specifically in Muscogee County. In 1980, the Columbus MSA had a population of 254,660. This figure increased to 260,860 by 1990 and to 274,624 by 2000, representing increases of 2.43 percent and 7.83 percent, respectively, from 1980 (U.S. Census 2001). The major urban center in the Alabama portion of the Columbus MSA is Phenix City (Russell County), located across the Chattahoochee River from Columbus, Georgia.

Housing

Housing is predominantly concentrated in the Columbus MSA, which has an inventory of 101,457 units (U.S. Census 2001). Of the occupied units (92,695), almost 40 percent are rentals. Although the Columbus MSA has a large inventory of rental housing units, generally in good condition, rents have been increasing at a fairly rapid pace, resulting in a lack of affordable rental housing for lower-ranking enlisted personnel. The majority of military personnel are housed on-post, although 3,291 military families reside off-post in privately owned housing. Of the roughly 19,320 personnel housed on-post, 18,900 are housed in enlisted barracks. Approximately 6,535 families are housed in on-post family housing (Personal Communication, Addison 2004). No military housing units are located in or adjacent to the Harmony Church area of the Installation where Alternatives I and II lie. The Kelley Hill area, which contains barracks, lies to the north.

Employment and Taxes

The Columbus MSA supplies most of the employment opportunities in the region. More than 14,000 workers commute to the city of Columbus, and approximately 7,000 commute to Fort Benning daily. The Columbus MSA serves as a regional trade, service, retail, wholesale, medical, and cultural center, serving not only the city, but also the surrounding rural area. From 1970 to 1991, total employment increased 23.42 percent, rising from 169,772 employees in 1970 to 209,535 in 1991. This increase has been particularly strong since 1980. Employment increases have been especially strong in the retail trade; finance, insurance and real estate; and services industries. The major sources of employment are the Federal, state, and local governments, service industries, manufacturing, and retail trade. The unemployment rate has fluctuated from a low of 4.2 percent in 1970, to 7.9 percent in 1980, 6.7 percent in 1990, and 7.3 percent in 2000 (U.S. Census 2001).

In September 2004, Fort Benning employed approximately 7,648 civilian personnel (personal communication, Addison 2004). This figure represents an 8.9 percent decrease from the 1990 work force of 8,330 personnel. Fort Benning civilian employees provide a vast array of professional, technical, administrative, craftsmen, and skilled labor jobs in support of the various missions. Currently, 40 percent of Fort Benning civilian employees are paid from appropriations (General Schedule and Wage Grade); the remaining 60 percent are either contracted or paid from non-appropriated funds. A significant number of construction workers are also employed daily by construction contractors. In 2004, approximately 34.5 million dollars were pending to be spent on various construction contracts on Fort Benning (Fort Benning Command Data Summary 2004).

In addition to civilian employees, 29,415 military personnel were employed at Fort Benning as of September 2004 (personal communication, Addison 2004). This figure represents a 15.4 percent increase from the 1990 military workforce of 25,490 personnel. In 2003, the impact of Fort Benning employment (to include military pay) on the Columbus MSA economy was estimated at approximately 1.9 billion dollars (Fort Benning Command Data Summary 2004). Outside the Installation, major increases in employment for the MSA are expected to occur in the services; finance, insurance and real estate; and retail trade industries according to Bureau of Economic Analysis employment projects for the region. Some growth may also be experienced in the transportation and public utilities industry as well as the construction industry. Overall, manufacturing employment is expected to decline, mainly because of changes in the textile industry, although increases in employment in the durable good sector, specifically in the primary metals industry, are expected.

The major sources of tax revenue for counties in the northern portion of the Installation are school/property and sales taxes. Property tax assessments in the Columbus MSA range from $3.60 to $16.80 per $1,000 in property value (U.S. Army 2004a). Georgia and Alabama levy 4-percent sales and use tax on the purchase of all goods and services (except for groceries in Georgia). In addition to these taxes, individual cities and counties within the northern portion of the Installation levy a sales tax of 1 to 3 percent. Other sources of revenue include the annual proceeds from the sale of forest products (i.e., timber operation) on Fort Benning, which are used for reimbursement of Installation and Corps of Engineer costs associated with the integrated

management, production, and sale of forest products. Net proceeds (if any) are distributed as follows: 60 percent to the Forest Product Reserve Account and 40 percent to the state or states where the Installation is located. States then disburse funds to the counties based on percent of total acreage of the Installation (U.S. Army 2004a).

Schools

The Installation is primarily served by four school systems: Muscogee County School System, Chattahoochee County School District, Phenix City-Russell County School Systems, and Fort Benning Dependent's Schools. Approximately 7,015 military dependents attend school, 3,815 of which attend school in one of the three off-post districts (U.S. Army 2004a). The Muscogee County School System is the largest of the three off-post systems, operating 52 schools and serving more than 29,000 students. With approximately 4,500 students and 300 teachers, the Phenix City Educational System is the second largest of the three main school systems and consists of six elementary schools, a middle school, junior high, and high school.

Chattahoochee County educates roughly 424 students in its elementary school. Although Chattahoochee County has no high school, an agreement with Muscogee County allows high school students to be educated at one of the Muscogee County high schools. In addition to public education, there are 18 private and parochial schools in the Columbus MSA. Dependents of military personnel that reside within the Fort Benning Installation are educated at Fort Benning Dependents Schools located on post. There are seven schools within the system, with an enrollment of 3,200 students in grades pre-school to eight. High school students residing on post attend Muscogee County high schools. Higher education is available through several universities in the area, including Auburn University, Mercer University, Columbus State University, Troy State University, Georgia Southwestern, Tuskegee University, Chattahoochee Valley Community College, LaGrange College, and Andrews Junior College. Troy State University and Georgia State University offer on-post courses at Fort Benning for military personnel. Vocational and technical training is offered at the Phenix City Vocational School and the Columbus Technical College, where associate degrees of applied technology may be obtained. No schools are located on or proximate to the Alternative I and II sites proposed for temporary BCT support facilities.

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, issued in 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

To characterize the demographics of the potentially affected area, certain U.S. Census data were used to estimate nearby populations. The Columbus MSA, and Muscogee, Harris, Chattahoochee, and the northern portion of Marion Counties in Georgia, along with Russell County, Alabama were evaluated for geographic race and income data. These areas extend beyond Fort Benning and the Columbus MSA, but provide a picture of the affected environment

for this EA. Population, race, and income data are provided in Table 3-3, which include comparable race and income data for Georgia.

In 2000, the population was predominately Caucasian. All but one area, Harris County, had a lesser percentage (from 7 to nearly 15 percentage points) of Caucasians than the state of Georgia. Marion County census tract 9801 had the greatest percentage of Caucasians, exceeding the state percentage by nearly 22 points. Harris County similarly exceeded the state by over 13 points. Marion and Harris Counties are also the only areas with a lower percentage of African Americans than the state (by nineteen and 9 percentage points respectively, and over 30 and 20 less than the Columbus MSA, respectively). Muscogee County had the least percentage of Caucasians (by nearly 15 percentage points less than the state and 4 fewer than the Columbus MSA) and the greatest percentage of African Americans (exceeding the state of Georgia by 15 percentage points and the Columbus MSA by over 3 percentage points). Russell County is similar to Muscogee County in terms of the percentage African Americans. Harris County is the least diverse, followed by Russell County, and Chattahoochee County is the most diverse in terms of the percentage of individuals reporting races other than Caucasian and African American.

The ethnicity and poverty status in the counties were compared to data for state populations to determine if any minority or low-income populations exist in the area that could be disproportionately affected by implementation of Alternative I, II, or III. The number of individuals below poverty level was over 2.5 percentage points greater in the Columbus MSA than the state of Georgia. Harris and Chattahoochee counties had fewer individuals below poverty level than the state. While Muscogee County had a negligible increase in percentage of individuals below the poverty level compared to the Columbus MSA, only Russell and the northern portion of Marion Counties had a greater percentage (by over 4 and 2 percentage points respectively). Conditions in this portion of Marion County are better than those in the remainder of the county where nearly 27 percent of individuals are below poverty level (U.S. Census Bureau 2001). Individuals below poverty level in Russell County are less than 4 percent of the state level of just over 16 percent (U.S. Census Bureau 2001). Per capita income was also the least for Russell County, although unemployment was slightly less than the state and Columbus MSA. The other two areas with low per capita income were Chattahoochee County and Marion County census tract 9801, both of which had the lowest unemployment rates in the area.

Table 3-3 Key Demographic and Economic Data							
	State of Georgia	***Columbus MSA***	***Muscogee County, GA***	***Harris County, GA***	***Chattahoochee County, GA***	***Marion County, GA Census Tract 9801***	***Russell County, AL***
Race							
Caucasian	65.1%	54.4%	50.4%	78.4%	58.1%	86.8%	56.7%
African American	28.7%	40.4%	43.7%	19.5%	29.9%	9.6%	40.8%
American Indian and Alaskan Native	0.3%	0.4%	0.4%	0.4%	0.8%	0.6%	0.4%
Asian	2.1%	1.3%	1.5%	0.5%	1.8%	0.2%	0.4%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.1%	0.0%	0.5%	0.2%	0.1%
Other Race	2.4%	1.7%	1.9%	0.3%	5.2%	0.8%	0.6%
Two or more Races	1.4%	1.7%	1.9%	0.9%	3.8%	1.8%	1.1%
Total	**8,186,453**	**274,624**	**186,291**	**23,695**	**14,882**	**3,627**	**49,756**
Economic Data							
Average per capita income (1999)	$21,154	$17,559	$18,262	$21,680	$14,049	$14,744	$14,015
Civilian labor force unemployed	3.6%	3.6%	4.0%	2.3%	1.7%	1.4%	3.5%
Individuals below poverty level	13.0%	15.6%	15.7%	8.2%	10.6%	18.0%	19.9%

Source: U.S. Bureau of Census, 2000 American Fact Finder.

3.2.4 Cultural Resources

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources. Historic districts can be classified under all three of these categories depending upon what they contain. Objects are defined in 36 CFR 60.3(j) as a material thing of functional, aesthetic, cultural, historical, or scientific value that may be, by nature of design, movable yet related to a specific setting or environment. They are an unknown category. *Archaeological resources* include any material remains of past human life or activities that are capable of providing scientific or humanistic understandings of past human behavior and cultural adaptation through the application of scientific or scholarly techniques (Archaeological Resources Protection Act of 1979, Section 3(I) 16 U.S.C. 470bb). For example, archaeological resources consist of sites, arrowheads, stone flakes, or bottles. *Architectural resources* include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance (NPS 2002). *Traditional cultural resources* can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, or traditional hunting and gathering areas that American Indians or others consider essential for the continuance of traditional cultures (NPS 1998).

Under the National Historic Preservation Act (NHPA) as amended, only historic properties warrant consideration of impacts from a proposed action and any associated mitigation. Historic properties are defined by the NHPA as any districts, sites, buildings, structures, or objects

included on or eligible for inclusion on the National Register of Historic Places. Historic properties include traditional cultural properties. Historic properties generally must be more than 50 years old to be considered for protection under the NHPA. However, more recent structures associated with significant national events may warrant protection if they are "exceptionally significant." To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4 for inclusion in the National Register.

Several other Federal laws and regulations have been established to manage cultural resources, including the Archaeological and Historic Resources Preservation Act (1974), the Archaeological Resources Protection Act (1979), and the Native American Graves and Repatriation Act (1990). In addition, coordination with Federally recognized American Indian Tribes associated with the Fort Benning area must occur in accordance with the American Indian Religious Freedom Act (1978), Executive Order 13007, *Sacred Sites;* and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments.*

The area of potential effect (APE) for cultural resources consists of the proposed construction locations for Alternatives I and II, the existing ranges (located within various existing training areas) and the existing firing points (located in training areas surrounding the southern portion of Impact DUD area K15) that would experience increased use under all three Alternatives (see Table 2-2 and Figures 2-4, 2-5, and 2-6).

Archaeological Resources. As of 2003, over 170,000 acres, close to 90 percent, of Fort Benning military reservation has been surveyed for archaeological resources, resulting in the identification of 3,837 archaeological sites. These sites include prehistoric archaeological sites through recent 20th century historical components. Of these sites, 2,609 have been determined not eligible to the National Register. Eighty-three are considered eligible to the National Register, including the Yuchi Town Site (1RU63) a National Register-listed property and a National Historic Landmark. The remaining 1,145 archaeological resources have not been evaluated. All unevaluated resources are treated as eligible for the National Register until determined otherwise.

Alternative I and II areas have been surveyed for archaeological resources. No archaeological resources have been recorded within these areas. The ranges are located within various training areas grouped into complexes, including the Malone Range Complex, the Dixie Road Range Complex, and CACTUS area.

A majority of the ranges and all but one of the firing points have been surveyed for archaeological resources. In those areas surveyed, no resources were identified. However, one of the mortar firing points and the ranges within the M6 training area have not been surveyed. Cultural resources that are National Register-eligible are not likely within M6 as it is an impact DUD area used for firing artillery and mortars. National Register-eligible cultural resources are a possibility at firing point concord, however the increase in use should not affect any resources more than they have been in the past.

Architectural Resources. Since 1987, architectural resources at seven of Fort Benning's cantonment areas have been inventoried, including those at Harmony Church. A total of 653 buildings, structures, and objects on Fort Benning are considered eligible for inclusion on the

National Register, including 605 structures that are part of five National Register-eligible historic districts. Although WWII-era structures are found within the construction footprints of Alternatives I and II areas, no National Register-eligible structures are located within either of these areas. Additionally, in 1986 a Programmatic Memorandum of Agreement (PMOA) was enacted among the DoD, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This PMOA allows for the demolition of temporary WW II-era structures or buildings after certain stipulations as stated in the PMOA are met, including extensive documentation meeting Historic American Buildings Survey/Historic American Engineering Record standards.

No National Register-eligible or listed buildings or structures are located in the existing ranges or training areas containing firing points.

Traditional Resources. Specific American Indian traditional resources or sacred sites or areas on Fort Benning where such sites may be located have not been identified to date. However, Fort Benning is consulting with 14 Indian Tribes that have identified themselves as being historically and culturally affiliated with the Fort Benning area. The 14 American Indian Tribes identified to date are Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma, Chickasaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Kialegee Tribal Town of the Creek Nation of Oklahoma, Muscogee (Creek) Nation of Oklahoma, Poarch Band of Creek Indians, Seminole Tribe of Florida, Seminole Nation of Oklahoma, Thlopthlocco Tribal Town, Keetoowah Band of Cherokee Indians of Oklahoma, Jena Band of Choctaw, Mississippi Band of Choctaw, and Choctaw Nation of Oklahoma.

3.2.5 Transportation

Transportation resources refer to the infrastructure and equipment required for the movement of people, manufactured goods, and raw materials in geographic space.

The Fort Benning area is served by several Federal, state, and county roads located in both Georgia and Alabama. There are nine major roads serving the Fort Benning area, some with multiple designations by Federal, state, or county systems. Because of its juxtaposition to the Columbus and Phenix City areas, primary access to Fort Benning is predominantly from the north. In terms of average daily traffic the four most utilized access roads are Benning Boulevard, Lindsay Creek Parkway (I-185), South Lumpkin Road, and Victory Drive (U.S. 280). The main gate to Fort Benning is located at the intersection of Benning Boulevard and South Lumpkin Road approximately 2.25 miles within the Installation boundary. The interior Installation road network consists of hundreds of miles of improved and unimproved roads and trails. Principal roads at the Alternative I and II sites include First Division Road, Eighth Division Road, and Highway 27/280 (refer to Figure 2-2).

In support of a force protection increase measure, General Eric K. Shinseki, United States Army Chief of Staff issued a Department of the Army directive dated March 1, 2001, mandating that permanent vehicle controlled access to all U.S. Army Installations worldwide be constructed. In support of this directive, temporary access control points (ACPs) were installed that restrict unauthorized access to Fort Benning. These ACPs consist of temporary sprung structures that

shelter either military police or civilian law enforcement personnel who check the identification of everyone seeking entry into Fort Benning via the road network (U.S. Army 2003). There are currently seven ACPs, one each at the following locations: Benning Boulevard, Lindsay Creek Parkway (I-185), South Lumpkin Road, Custer Road, Sand Hill, First Division Road, and Eddy Bridge. These temporary ACPs are currently being replaced with permanent structures to better facilitate Installation security.

Other methods (such as drum/wedge, traffic arm barricades and bollards) restricting unauthorized access to the Installation have also been emplaced on other paved roads, dirt roads, and trails that formerly provided access across or into the Installation (U.S. Army 2003). Fort Benning is also constructing a physical security perimeter barrier (fencing, guard rail, or use of existing natural terrain barriers) to further restrict access by unauthorized vehicular movement into three of the Installation's main cantonment areas and Sand Hill training area. The main north-south corridor for traffic within the vicinity of the Alternative I and II construction/support facility areas is Highway 27/280. One ACP also exists near the northern boundary of Alternative I, on First Division Road west of Highway 27/280.

There are two commercial bus lines in the Fort Benning/Columbus/Phenix City area: Greyhound Bus Lines and the Columbus Transportation System, Metropolitan Transit (METRA). METRA provides bus shuttle service between Fort Benning and Columbus. Three government-operated shuttle bus routes are provided within the Installation, serving Main Post, Harmony Church, Sand Hill, and Kelley Hill. No commercial mass transit routes approach or are proximate to Harmony Church; Soldiers are routinely transported for training in this area by military vehicles.

3.2.6 Utilities

Utilities at Fort Benning include electrical power, natural gas, the potable water supply systems, wastewater and storm water systems, solid waste collection, and disposal and communications systems. The storm water system has been discussed previously under the water quality section. Natural gas would not be used as part of construction or operation of the BCT facilities and supporting structures including training activities. Therefore, natural gas will not be discussed further in this document.

Energy Systems

Electricity to Fort Benning is provided by two Georgia Power substations, one on Marne Road and the second in the sandhill area. Voltage is transformed, metered, and fed to the adjacent Flint EMC owned substations. Transmission lines leave substations to supply power to the cantonments, family housing, and other developed areas of the Installation. Electricity is also provided to training facilities located outside the cantonment areas in the range and training area of the Installation. There is no power generation system for the entire Installation, but emergency power generators are in place at critical locations, such as the airfield, control tower, hospital, communications center, water treatment plant, transmitter sites, radio beacon sites, and steam plants. Currently, coverage in the Harmony Church area is not complete and new customers would need additional coverage.

Sanitary Sewage

There are two wastewater treatment plants (WWTP) that serve the entire Installation with a combined capacity of 16 million gallons per day. Approximately 95,000 gallons per month of anaerobically digested sewage sludge is land applied at off-post sites operated by Columbus Water Works. The sanitary sewage collection system consists of approximately 126 miles of 6- to 24-inch vitrified clay, cast iron, and concrete lines. Twenty-four lift stations are required to move sewage flows across the rolling terrain of Fort Benning. Fort Benning's water and wastewater systems were recently privatized.

Fort Benning retains ownership of the underlying lands; however, the ownership, operation, and maintenance of the buildings, systems, and associated water and wastewater facilities has become the responsibility of Columbus Water Works per an agreement signed in early October 2004. Columbus Water Works, the Columbus, Georgia municipal sewage treatment provider, has plans to connect the existing facilities at Fort Benning to the Columbus system and eventually phase out the Fort Benning sewage treatment plants. There are dated lift stations and wastewater collection systems found in the Harmony Church area, but none occur directly within Alternative I or II.

Water Supply/Treatment

Upatoi Creek has a mean annual flow of 451 cubic feet per second (cfs) and is the major supplier of water for Fort Benning. The water from the Upatoi Creek is treated at the Installation treatment plant and distributed throughout Main Post, Harmony Church, Kelley Hill, Sand Hill, and the housing areas by a network of lines ranging in size from 3 to 20 inches in diameter. As a result of the privatization, Columbus Water Works owns, operates, and maintains the water systems at Fort Benning. Columbus Water Works plans on connecting water supply systems from the municipality to the Installation and phasing out use of the Fort Benning treatment plant. There are seven public water supply (drinking water) wells on Fort Benning proper (U.S. Army 2004a). Water supply for all other areas of the Installation is transported to the training compartments/sites by water buffaloes (600-gallon tanks on transport trailers). The use of water wells is a common practice on the Installation's outlying ranges, where no connection to water systems is possible. Currently, there are no wells that serve the Harmony Church areas proposed for construction of the BCT support facilities. The State of Georgia requires a Drought Contingency Plan be implemented in periods of drought which may limit the amount of water available for withdrawal.

Solid Waste Collection and Disposal

Landfills. Fort Benning generates uncompacted solid waste at an estimated rate of 1,200 to 1,500 tons per month. The Installation does not have a permitted sanitary landfill in operation. Currently, all Fort Benning sanitary waste is transported to a state-permitted facility located off-post. There are three approved inert landfills on the Installation; however, only one is currently in operation. These landfills are designed to accept only inert materials such as fallen limbs and trees, concrete (free of lead based paint), and cured asphalt.

Recycling. Recycling reduces disposal cost, conserves natural resources, and minimizes environmental problems associated with land disposal. Fort Benning's policy on recycling is governed by the June 11, 2003 Policy Memorandum #200-1-8, entitled "Qualified Recycling Program." Under this policy, Army personnel and contractors are required to actively participate in the recycling program, and all of the proceeds from the program are retained by the Installation. Recyclable materials that may be collected include paper, cardboard, metal cans, glass containers, scrap lumber, used motor oil and plastics; however, the list of materials that Fort Benning accepts varies according to market conditions and other factors. Recyclable materials are turned-in to the Installation Defense Reutilization Marketing Office (DRMO) and the Materials Recovery Facility (MRF) for processing.

Communications Systems

The official on-post telephone system is operated and maintained by contract. Bell South provides the unofficial service to family and bachelor housing and other unofficial users. Trunks to facilitate toll-free calling between the two separate systems interconnect the Army owned and Southern Bell systems. Currently, there are dated communication trunks found within the Harmony Church area. Cellular phone service at Fort Benning is supplied by one cellular phone tower in the Main Post area near the intersection of Upton and Hall Roads. The current service this provides in the Harmony Church area is unsatisfactory. An additional tower is planned to serve the Harmony Church area; it will be located west of Old Cusseta Road and south of Pitts Avenue. This is within the southernmost portion of the Alternative I site near the proposed Vehicle Maintenance facilities in Figure 2-9. It will be within a 10,000 square-foot lease area and operated by Tower Economics. A third tower is currently under construction near Marne Road to serve the Sand Hill and Kelly Hill areas (personal communication, Mickey 2004).

The Fort Benning Fire Department operates a fire reporting communications system. The cable; however, is carried with the telephone cable distribution system. This system allows emergency responders to immediately locate the place of origin of any emergency called in to the control center. There are no systems found within the vicinity of Alternatives I and II. Another major communications system at Fort Benning is the cable television system, which is operated by a private company. The contractor has the responsibility for operation and maintenance of the system under terms of a license. The Public Affairs Office (PAO) operates a separate educational television system in Infantry Hall. It operates under the call letters WFBG. The system is owned and operated by the Installation in support of military training. Currently, such systems are available at this time in the Harmony Church area of the Installation.

3.2.7 Hazardous Materials and Waste

Hazardous materials and waste are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Act (OSHA); the Resource Conservation and Recovery Act (RCRA); the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and the Emergency Planning and Community Right-to-Know Act (EPCRA). The CWA also addresses hazardous materials and waste through Spill Prevention, Control, and Countermeasure (SPCC) and NPDES requirements.

Hazardous materials have been defined to include any substance with special characteristics that could harm people, plants, or animals when released.

Hazardous waste is defined in the RCRA as any "solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment." Waste may be classified as hazardous because of its toxicity, reactivity, ignitibility, or corrosivity. In addition, certain types of waste are "listed" or identified as hazardous in 40 CFR 263.

Fort Benning's Hazardous and Toxic Materials/Waste Management program has three major functions: 1) storage, handling, and disposal; 2) waste minimization; and 3) remediation. A detailed discussion of these programs is presented in the Installation Hazardous Waste Remedial Actions Program (HAZWRAP). As part of this program, and in accordance with AR 200-1 and applicable federal and state regulations, the Fort Benning Hazardous Waste Management Plan was developed. This plan assigns responsibility and provides instructions for waste handling and management to ensure conformance with applicable policies and regulations. Fort Benning operates under Hazardous Waste Facility Permit (RCRA Part B) No. HW-021 (S)-2 and Facility I.D. No. GA3210020084. As of December 1, 2004, Fort Benning utilizes a 90-day central accumulation point for waste turn-in and management and no longer utilizes a treatment storage and disposal facility.

The U.S. Army policy for radon is outlined in AR 200-1 and includes requirements to measure radon in newly constructed Army facilities and utilize design criteria for radon reduction in new construction. AR 200-1 also outlines procedures for identification and mitigation of elevated radon levels. Radon information provided by Region IV, U.S. Environmental Protection Agency (EPA), and statistics maintained by the GA DNR suggest that there are no regional concerns and that there is little potential for radon occurrence in the area of Alternatives I, II, and III, including in ranges and training areas; therefore, this will not be analyzed further in this document.

The electrical utilities have been privatized on Fort Benning and Flint EMC is the owner and operator. Fort Benning ensures Flint EMC does not utilize PCB-containing materials anywhere in the Fort Benning electrical distribution system. Additionally, Fort Benning will not permit the use of PCB containing materials as insulation materials for construction, maintenance or in renovation projects on the installation. There is only one known PCB-containing transformer on Fort Benning, located on Appari Range in the Harmony Church area; it is scheduled to be removed and replaced by February 2005 (personal communication, Hines 2004). Neither construction of facilities nor the operations of the proposed BCT, including activities in ranges and training areas, would utilize PCB-containing, materials; therefore, this will not be analyzed further in this document.

Solid Waste Management Units (SWMU). Past resource and waste management practices at Department of Defense (DoD) facilities have resulted in the presence of toxic and hazardous waste contamination at some Installations, including Fort Benning. In response, DoD has undertaken environmental restoration activities under its Installation Restoration Program (IRP) to manage these sites, known as Solid Waste Management Units (SWMU) (Fort Benning, 2003). Fort Benning's IRP activities fall under compliance with the Resource Conservation Recovery

Act (RCRA). This Federal law, enacted in 1976, ensures the proper management of hazardous waste at active sites or facilities. The IRP also conforms to the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA guidelines are followed in conducting investigation and cleanup work in the program. Disturbance of a SWMU is prohibited unless prior coordination with GA DNR determines otherwise.

Fort Benning identified 44 Defense Environmental Restoration Account (DERA) SWMU sites and 87 Operation and Maintenance Account (OMA) SWMU sites, including landfills, paint facilities, pesticide contamination, other industrial areas, a fire training area, a chemical agent burial site, and petroleum-oil-lubricant (POL) contaminated areas. Twenty-five of the 44 DERA SWMU sites were found to require no further action, either because contamination no longer exists or because the levels of contamination pose no risk to human health or the environment. The remaining 19 DERA SWMU sites are considered active and are subject to current or future investigation, removal action, cleanup, or long-term monitoring. Forty-two (42) of the OMA SWMU sites have been determined to need no further action, as well, with 45 currently managed as active and subject to further investigation (U.S. Army 2004a). Military ordnance firing on and landing within a range is not considered a solid waste when it is involved in training, emergency response, or on-range ordnance clearing.

There are two SWMUs within the Alternative I and II sites that have been reviewed as part of RCRA facility assessments. The locations of these sites are provided in the 1994 RCRA Site Assessment (USACHPPM 1994). Site number FTBN-019 is within the Alternative II area north of Eighth Division Road and west of Wood Road, in an area currently occupied by a jogging track. This site is a closed landfill of approximately 6 acres; water quality data indicate no pollution problems, and No Further Action (NFA) status was granted from the GA Environmental Protection Division (EPD) after a 1994 RCRA Site Assessment. This site cannot be excavated nor can structures, including paved parking areas, be placed here. However, gravel parking lots for light vehicles or recreation areas could be developed on this site.

The second site, number FTBN-047, is a former wash rack grit storage area used in 1992 and 1993 and located northeast of the intersection of Eighth Division Road and Highway 27/280, directly north of the Canine School area. This site falls mainly within the Alternative II site, but also partially within the Alternative I area (USACHPPM 1994). Recommendations for this site from the December 1994 RCRA Site Assessment included collection of soil samples off the northern edge of the SWMU to analyze for metals and determine if release of hazardous constituents has occurred; removal and disposal of the wash rack grit prior to closure of the SWMU was also recommended (USACHPPM 1994). This site was investigated in 1995 and additional work was performed in 2003. GA EPD is currently reviewing the final report and risk assessment. NFA status is expected to be granted in Spring 2005 for this SWMU (Morpeth 2004). If the state grants the NFA status, after which there would no limitations on structures that could be placed at this site. However, if the NFA status is not granted, this area would be avoided during construction.

Asbestos Management

Routinely, all Fort Benning facilities scheduled for maintenance, remodeling, and demolition are inspected for presence of Asbestos-Containing Materials (ACM), when required by law or as a precautionary measure when ACM is removed through outside contracts by licensed specialized firms. Removed ACM is properly transported off post and disposed in licensed facilities in accordance with Army regulations and Installation policies and guidelines. Due to the age of the buildings being proposed to be demolished, there may be ACM present. In the event that a survey conducted prior to any disturbance, identifies any ACM, the materials would be disposed of in accordance with the Installation HAZWRAP.

Lead Based Paint Management

The likelihood for buildings built prior to 1978 to contain lead-based paint (LBP) is high. Painted surfaces can be tested to determine if LBP is present. If testing has not been performed, surfaces painted before 1978 should be assumed to contain lead-based paint. Since the buildings proposed for demolition may contain LBP, if it is encountered, the materials would be disposed of in accordance with the Installation HAZWRAP.

Military Munitions Management

The Military Munitions Rule (MMR) outlines responsibilities for the management of waste military munitions. Proper management of waste munitions may prevent waste munitions from becoming hazardous waste. Military units are responsible for ensuring that all munitions are handled and used in accordance with DoD policies and regulations. Where required by the MMR, units recover munitions that qualify as Waste Military Munitions and turn them in to the Ammunition Supply Point. The Ammunition Supply Point is responsible for the management of waste munitions.

3.2.8 Public Health and Safety

Fire Protection, Police Protection, and Health Services

According to the Fort Benning Defense Multi-Purpose Range Complex (DMPRC) EIS, a police department serves the city of Columbus. The Columbus Fire Department consists of full-time firemen at eleven fully equipped stations. Phenix City has a police force and a three-station fire department. In Chattahoochee County, volunteer firemen supply fire protection, while sheriff /police provide law enforcement protection for the county. There are ample medical and dental facilities serving the area and they are concentrated in the Columbus area. In addition to 911 emergency assistance services, the area also has emergency medical services available at five emergency medical locations. Fort Benning provides medical evacuation helicopter service and additional medical services to the community when needed. Lawson Army Airfield plays an important role in the operation and maintenance of the aircraft participating in the support of the surrounding communities. Fort Benning personnel also provide emergency response service on Post, including reports of fires, utilizing existing roadways.

Unexploded Ordnance

Infantry training at Fort Benning has been conducted since the Installation was first established in 1918. Infantry training has required, and continues to require, the use of "blank" as well as "live" ammunition. The type of ammunition used for training purposes is diverse. It virtually encompasses every weapon system from small caliber individual weapons to air delivered 500-pound bombs. Blank ammunition and various pyrotechnic simulators are used throughout the entire training area. Live-fire training is conducted in designated ranges and training areas, with projectiles directed towards designated ordnance impact areas. The Fort Benning military, civilian personnel, and the community are routinely advised and reminded not to handle any suspected unexploded ordnance (UXO), and to report suspicious ordnance to the Explosive Ordnance Detachment (EOD) and to the Director of Public Safety via 911 calls. The Alternative I and II sites have been developed during World War II and there has been no firing of ammunitions or training devices in this location since that time; therefore, the probability of finding UXO at these sites is low (personal communication, Chauvey/Holloway 2004).

Surface Danger Zone

The surface danger zone (SDZ) is an "invisible" line that surrounds the firing range and ordnance impact area portions of a range and provides a buffer area to protect personnel from the non-dud producing rounds that may be ricocheted during operation of the range (U.S. Army 2004a). For each training scenario on a range, the SDZ is computed to take into account the firing positions and ordnance used, so the SDZ exclusion zone will vary. The proposed BCT at Alternative I and II sites in Harmony Church is not found within the vicinity of a firing range or ordnance impact area or SDZ.

3.2.9 Air Quality

Air quality in a given location is described by the concentration of various pollutants in the atmosphere. A region's air quality is influenced by many factors including the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions.

The significance of the pollutant concentration is determined by comparing it to the Federal and state ambient air quality standards. The Clean Air Act (CAA) and its subsequent amendments (CAAA) established the National Ambient Air Quality Standards (NAAQS) for six "criteria" pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns (PM_{10}), and lead (Pb). These standards (Table 3-4) represent the maximum allowable atmospheric concentrations that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. Short-term standards (1-, 8-, and 24-hour periods) are established for pollutants contributing to acute health effects, while long-term standards (quarterly and annual averages) are established for pollutants contributing to chronic health effects. The GA EPD adopted the NAAQS as the standards for the state.

Table 3-4 Georgia and National Ambient Air Quality Standards[a]			
	AVERAGING TIME	***PRIMARY[b,c]***	***SECONDARY[d]***
Ozone (O_3)	1 Hour	0.12 ppm[e]	Same as Primary
	8 Hours	0.08 ppm	
Carbon Monoxide (CO)	8 Hours	9.0 ppm	None
	1 Hour	35 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm	Same as Primary
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	0.03 ppm	None
	24 Hours	0.14 ppm	
	3 Hours	---	0.5 ppm
Particulate Matter (PM_{10})	Annual Arithmetic Mean	50 $\mu g/m^3$[e]	Same as Primary
	24 Hours	150 $\mu g/m^3$	
Particulate Matter[f] ($PM_{2.5}$)	Annual	15 $\mu g/m^3$	Same as Primary
	24 Hours	65 $\mu g/m^3$	---
Lead (Pb)	Quarterly Arithmetic Mean	1.5 $\mu g/m^3$	Same as Primary

Notes a: These standards, other than for ozone and those based on annual averages, must not be exceeded more than once per year. The ozone standard is attained when the expected number of days per calendar year with a maximum hourly average concentration above the standard is equal to or less than one.
b: Concentration is expressed first in units in which it was adopted and is based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. All measurements of air quality must be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of Hg (1,013.2 millibars); ppm in this table refers to ppm by volume, or micromoles of regulated air pollutant per mole of gas.
c: National primary standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.
d: National secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a regulated air pollutant.
e: ppm = parts per million by volume, $\mu g/m^3$ = micrograms per cubic meter.
f: Currently under review by the U.S. Supreme Court.

Based on measured ambient criteria pollutant data, the EPA designates all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. The CAA requires each state to develop a State Implementation Plan (SIP) that serves as its primary mechanism for ensuring that the NAAQS are achieved and maintained within that state. According to plans outlined in the SIP, designated state and local agencies implement regulations to control sources of criteria pollutants. The CAA provides that Federal actions in nonattainment and maintenance areas do not hinder future attainment with the NAAQS and conform to the applicable SIP.

The CAA also establishes a national goal of preventing degradation or impairment in any Federally-designated Class I area. As part of the Prevention of Significant Deterioration (PSD) program, mandatory Class I status was assigned by Congress to all national parks, national wilderness areas, memorial parks greater than 5,000 acres and national parks greater than 6,000 acres. In Class I areas, visibility impairment is defined as a reduction in visual range and atmospheric discoloration. Stationary sources, such as industrial complexes, are typically an issue for visibility within a Class I PSD area. For new sources that may impair visibility or degrade air quality, applicants may be required to analyze potential impacts to Class I areas within 100 kilometers (62 miles) of the source. There are no PSD Class 1 areas or protected vistas within a 100-kilometer (standard review distance) radius of Fort Benning. Therefore, visibility impairment due to Installation-generated emissions is not a concern.

The affected environment for this EA is specifically Muscogee, Harris, and Chattahoochee Counties. Although a small portion of Marion County, Georgia is found within Fort Benning's boundaries, it would not be affected by the proposed action and alternatives. Therefore, this county is not evaluated as part of the MSA for this resource. In general, this part of Georgia enjoys relatively good air quality, with levels of most criteria pollutant emissions within required standards. However, Muscogee County, GA and Russell County, AL have been designated by U.S. EPA for nonattainment of $PM_{2.5}$ (material primarily formed from chemical reactions in the atmosphere and through fuel combustion such as motor vehicles, power generation, industrial facilities residential fire places, wood stoves and agricultural burning [MOE 2004]) as part of the Columbus MSA. With this determination, future Army actions may be required to conduct conformity determinations. Re-evaluation of attainment status, recommendations, and calculations to compare to air quality standards in Russell and Muscogee Counties for $PM_{2.5}$ are currently underway by the Alabama Department of Environmental Management (ADEM). Specifically, ADEM is using their Smoke Management Program (SMP) and discounting the $PM_{2.5}$ amounts generated by prescribed burning and other burning for land management.

Fort Benning is working with GA DNR to establish an SMP, per U.S. EPA guidelines, *U.S. EPA Interim Air Quality Policy on Wildland and Prescribed Fires* (23 April 1998), because much of the $PM_{2.5}$ generated at Fort Benning and the surrounding is from wildfires and prescribed burning for land management purposes. If the SMP is certified by the state, then according to the U.S. EPA Policy, $PM_{2.5}$ emissions from prescribed burning would not count towards nonattainment. A state-certified SMP may avoid a future $PM_{2.5}$ nonattainment designation in the Fort Benning affected environment.

Another form of particulate matter is fugitive dust. These particulate materials are released from sources that do not have a source point exit such as a stack or vent. Examples are an uncovered truck bed, or train car, or emissions caused by vehicles traveling over a dirt road. The letter from Harold Reheis, GA EPD, April 2003, gives Fort Benning relief during military training and exercises, but not for other activities such as construction. The Georgia Rule for Air Quality (391-3-1.02(2)(n) suggests several ways to mitigate for fugitive dust for activities not related to military training. Fort Benning's Title V Permit (Fort Benning 2004) contains sections on Particulate Emissions and Visible Emissions. The Title V section Particulate Emissions states the exact wording as the GA Rules for Air Quality 391-3-1.02(2)(e) Particulate Emissions for Manufacturing Processes except for the section title. Below processes are applicable at Fort Benning according to GA Rules for Air Quality 391-3-1.02(2)(n) Fugitive Dust:

> 1. All persons responsible for any operation, process, handling, transportation, or storage facility, which may result in fugitive dust, shall take all reasonable precautions to prevent such dust from becoming airborne. Some reasonable precautions which could be taken to prevent dust from becoming airborne, include, but are not limited to the following:
>
> > (i) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operation, the grading of roads or the clearing of land;
> >
> > (ii) Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces which give rise to airborne dusts;

(iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods can be employed during sandblasting or other similar operation;
(iv) Covering at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dusts;
(v) The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

2. The percent opacity from any fugitive dust source listed in paragraph 2(n)(1) above shall not equal or exceed 20 percent.

Table 3-5 presents total annual emissions of criteria pollutants for the multiple-county Columbus, GA-AL MSA area potentially affected by the BCT establishment. Fort Benning emissions represent less than 9 percent contribution of all criteria pollutants within the MSA.

Table 3-5 Total Pollutant Emissions Columbus, GA-AL MSA (tons/year)[a]

	CO	***VOCs***	***NO_x***	***SO_x***	***PM_{10}***	***$PM_{2.5}$***
MSA Emissions	113,451	18,321	15,490	3,368	14,878	5,056
Ft. Benning[b]	10,271	406	199	0.61	989	1,331
Percent Contribution by Ft. Benning	9	2	1	0.01	7	26

Source: [a]USEPA AirData. 2004. Tier Emissions Report. Note: most recent data available are from 1999.
[b]Air Emissions Inventory for 2003, Fort Benning, GA

A locale's air quality status and the stringency of air pollution standards and regulations depend on whether monitored pollutant concentrations attain the levels defined in the NAAQS. Areas with ambient concentrations less than these levels are in "attainment" and areas that exceed these standards are classified in "nonattainment."

Fort Benning is located within Muscogee, Harris, and Chattahoochee Counties, GA, with the majority of its operational activities taking place in Chattahoochee County. Stationary source emissions at the Installation include engine testing, external and internal combustion sources, painting operations, storage tanks, fueling operations, solvent usage, surface coating, and miscellaneous general process operations. Mobile source emissions include wheeled and tracked vehicle operations and support equipment. At this time GA EPD does not regulate mobile sources on Fort Benning; however, new regulations proposed by the EPA concerning particulate matter and nitrous oxides may result in changes to this situation; therefore, air issues may need to be re-addressed before the final stationing of the BCT. Prior to any units being built or installed, a pre-construction permit and/or an operating air permit must be completed. In addition, any storage of chlorine (including amounts less than 2,500 pounds) is subject to Section 112(r) of the CAA and requires the preparation and implementation of a Level III Risk Management Program (RMP), in coordination with the Installation Air Quality Program Manager. A Level III RMP includes determining worst case and alternative case release analysis, performing a Process Safety Hazard Analysis, establishing operating procedures and an emergency response program, conducting monthly safety briefings and yearly compliance audits, and coordinating with local emergency personnel.

3.2.10 Noise

Noise is usually defined as "unwanted sound" and recognized as an environmental pollutant. It can interfere with communication, work, rest, recreation, as well as sleep, and may produce physiological or psychological damage. Military and non-military activity on and around Fort Benning produce both intermittent, pulse sounds (such as tank and artillery fire) and continuous sounds (such as vehicles moving along highways and roadways or aircraft moving across the sky). These types of sounds are produced in Fort Benning's impact areas and ranges by vehicles, equipment, and artillery training.

Sound intensity results from the energy used to produce it. It can be measured or predicted based on knowledge of its source, such as the characteristics of an airplane's engine or of a vehicle motor. The human ear's ability to hear covers an enormous range of sound. To make sound intensity measurement more meaningful and understandable, the unit of measurement known as the decibel (dB) is used. The decibel scale begins at the approximate level of the smallest amount of sound detectable by the human ear. Figure 3-4 shows various sound levels corresponding to typical sources, both indoor and outdoor. Because of the physical characteristics associated with noise transmission and reception, a doubling in sound pressure squared normally results in about a 3 dB increase in noise levels while a 10 dB noise level increase is generally required to perceive a doubling of perceived noise. A 1 to 2 dB change in ambient noise levels is generally not audible, even to sensitive receptors.

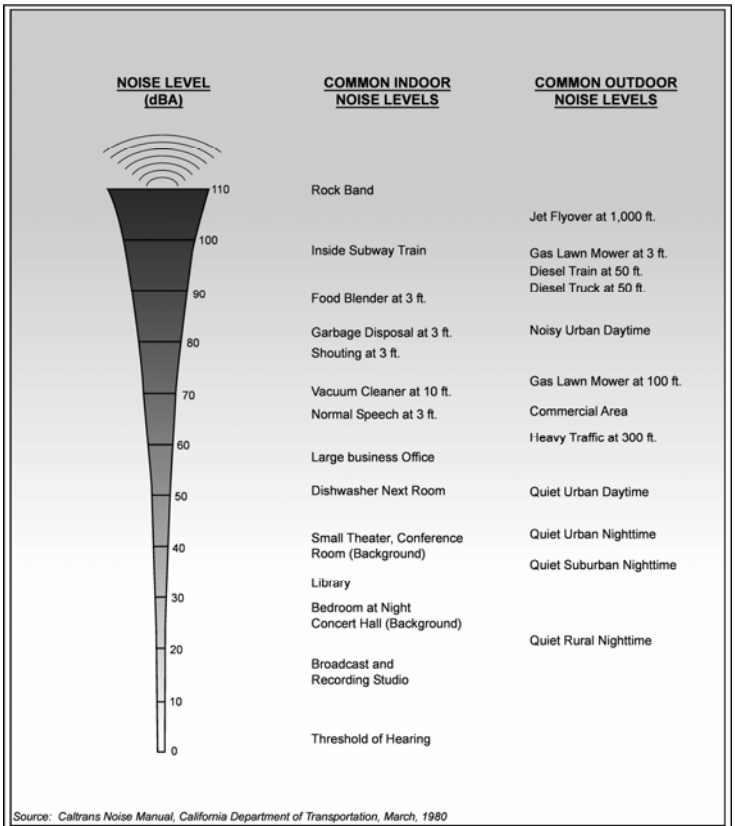


Figure 3-4
Common Noise Levels

The dB level of a sound decreases (or attenuates) exponentially as the distance from the source increases. For a single point source, like a construction backhoe, the sound level decreases by approximately 6 to 8 dBs for each doubling of distance from the source. Sound that originates from a linear, or 'line' source, such as a heavily traveled traffic corridor, attenuates by about 3 to 5 dBs for each doubling of distance due to spherical spreading air absorption and ground attenuation. Depending upon their nature, such features can minimally to substantially reduce noise levels.

The Army uses computer models to predict and measure environmental noise, and employs the Environmental Protection Agency's recommended Day-Night Sound Level (DNL) framework to analyze noise and as a land–use planning tool. The DNL system describes the average daily sound energy over the period of a year. Averaging means those moments of quiet are compared together with moments of loud sounds. The system also "penalizes" sounds, which may be more annoying because they occur at night (approximately 10 PM to 7 AM), by assigning them a higher sound value of ten (10) dBs.

The Army uses two methods to "weight" the sounds that people actually hear and experience. The first method, called the "A-weighted Day-Night Average Noise Level" (ADNL) closely resembles the frequency responses of the human ear, and is used to analyze such sounds as traffic, airplanes, and the sounds made by rifles and machine guns. The second method, the "C-weighted Day-Night Average Noise Level" (CDNL), is more suited to predict and analyze the impacts of the lower frequency parts of sound, which form a large part of such impulse noises as heavy artillery fire and detonation of explosives. These low frequency components of sound waves can cause windows to rattle and buildings to shake.

The reactions of people who live on or near the Installation to hearing these sounds can be affected by a number of variables. These include closeness to the sounds, strength of the sounds, time of the day or the day of the week of the sounds, and the expectation of hearing them. Other factors include: intensity, duration, repetition, abruptness of onset or cessation, background noise levels, interference with activities, previous community experience with the noise, time of day, fear of personal danger from the noise source, and extent that people believe the noise can be controlled.

The nearest urban areas to Fort Benning are Columbus, GA, located to the Installation's west and north, and Phenix City, AL, located to the west of Columbus and across the Chattahoochee River. Noise sources are typical of urban areas and include highway traffic, emergency vehicle sirens, aircraft, construction activities, railroads, and commercial and industrial activities. Buena Vista, GA, is located to the east of Fort Benning and has typical noise sources for a small town. Rural areas also lie to the northeast, southwest, and south of Fort Benning and consist of various farms, timberlands, and isolated residences. Noise sources in these areas are relatively minor and are the result of vehicular and agricultural sources. Added to these noises are those emanating from Fort Benning, that include small arms firing, mortar, tank gun and artillery firing, heavy-tracked and wheeled vehicles, rotary and fixed-wing aircraft, and various pyrotechnic devices.

Army Regulation 200-1, *Environmental Protection and Enhancement,* defines the requirements for the Army's Environmental Noise Management Program. Three noise zones (NZ) are defined in the regulation:

Zone I (compatible): Housing, schools, medical facilities, and other noise-sensitive land uses are compatible with noise levels in the zone (all areas not contained within Zone II or Zone III).

Zone II (normally incompatible): Noise-sensitive land uses (e.g., housing, schools, medical facilities) are normally incompatible with noise levels in this zone unless measures have been taken to attenuate interior noise levels.

Zone III (incompatible): Noise-sensitive land uses (e.g., housing, schools, medical facilities) are incompatible in this zone.

Table 3-6 provides the decibel noise levels associated with the individual zones as well as the percent of population potentially annoyed by these noise levels. Figure 3-5 provides the existing noise contours at and around Fort Benning.

Table 3-6 Noise Zone Criteria and Population Highly Annoyed

	Percent Population Highly Annoyed	***Equipment Operations, Transportation, Aircraft and Small Arms (ADNL)***	***Impulsive Noise from Large Caliber Weapons (> 20mm) and Demolitions (CDNL)***
Zone I	<15	<65	<62
Zone II	15 - 39	65 - 75	62 - 70
Zone III	>39	>75	>70

Source: AR 200-1, Chapter 7.

From operational data provided by Fort Benning Directorate of Training, the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) applied the BNOISE2 (U.S. Army 2000) noise simulation program to analyze noise sources and develop contours from vehicles, equipment, and artillery firing operations. Unlike topographic contours on a map, noise contours are not intended to be precise representations of noise zones. Geographic features, forest canopy, weather conditions, and the receiver's perception of the source, etc., can influence the impact of noise. Noise contours cannot be so precise as to define one side of a noise contour line as clearly compatible and the other as incompatible. However, the noise contour maps have been used as a reliable planning tool in noise-affected areas (i.e., airports and military reservations) throughout the United States.

At Fort Benning, existing impulse noise from tank and vehicle operations as well as artillery fire causes Zone III noise levels to occur off-Post, in the northeast portion. Zone II levels occur off-Post in the east and west. Within Fort Benning, Zone III noise effects on wildlife and protected species occur; however, the Army Construction Engineering Research Laboratory completed a rigorous 3-year evaluation of the woodpecker's reaction to a range of military noise events. The study found that it adjusts to the military noise and that exposure does not produce mortality or statistically-detectable changes in reproductive success (USACERL 1999).

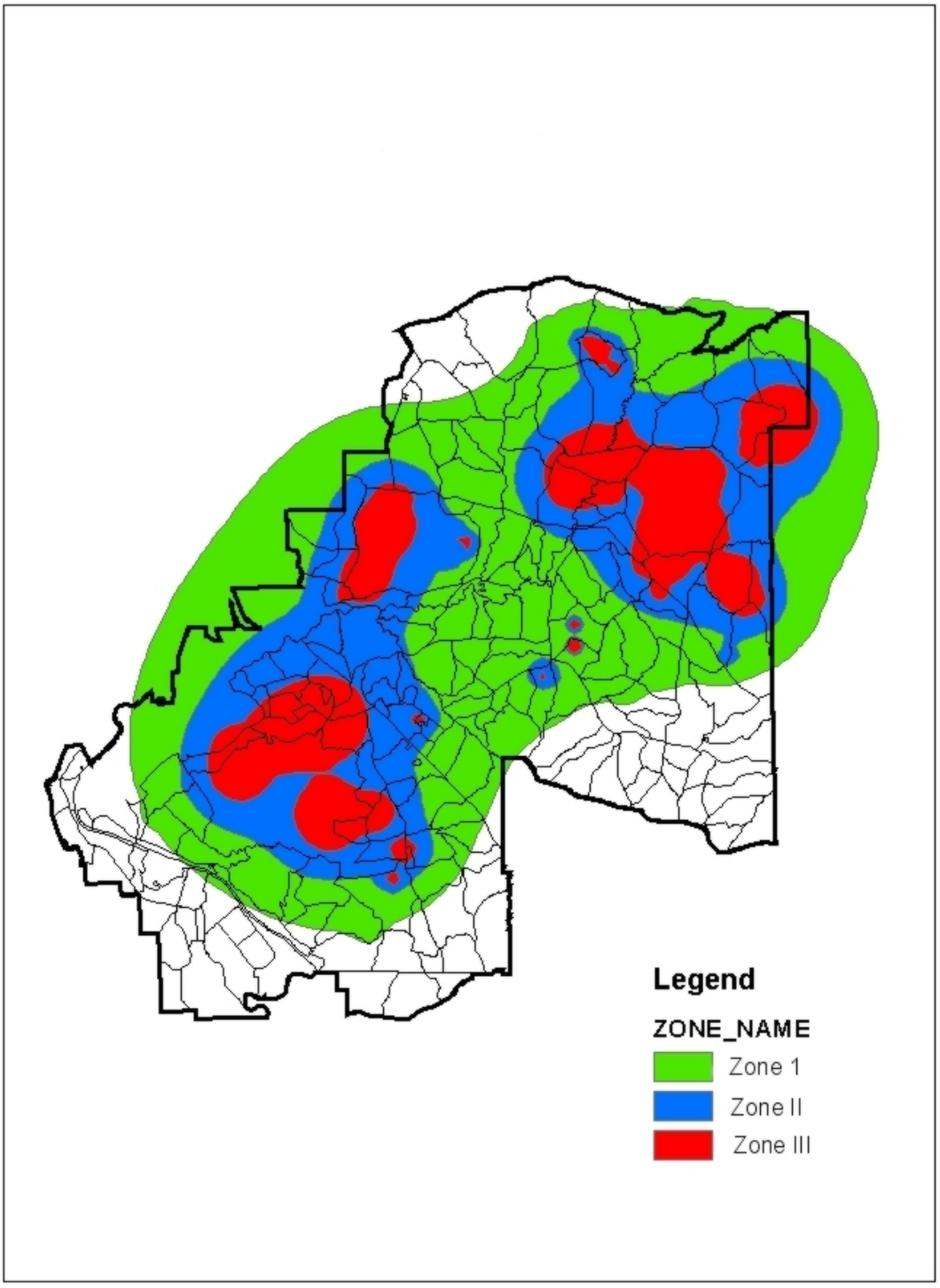


Figure 3-5 Fort Benning Existing Noise Contour

To address noise concerns in the surrounding community, Fort Benning has voluntarily imposed the following operational restrictions for range firing to reduce the existing range noise impacts on the community:

- Firing of weapons .50 caliber or greater restricted between midnight and 6:00 AM,
- Exceptions approved in advance by a Brigade or Regiment Commander, and
- The Fort Benning Public Affairs Officer is notified of any firing during restricted hours and, in turn, distributes that information through the local news media to the public.

Fort Benning maintains a noise complaint system to address community and citizen concerns and noise complaints may be reported to Fort Benning by calling the Fort Benning 24-hour Staff Duty Officer. If warranted, further investigation and action will follow (personal communication, Veenstra 2004).

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

The approach used for this impact analysis is to compare what would occur if the proposed action alternatives and no-action alternative were implemented at Fort Benning. The environmental impact analysis process is designed to focus analysis on those environmental resources that could potentially be affected by the new BCT including its support facilities and training. Potential effects may result from different aspects of Alternatives I, II, and III, including construction, operations and training, or personnel changes.

BCT training would include "basic" training where the foot-soldier learns the techniques and regiment of basic soldiering, including weaponry, fighting skills, tactics, and discipline. Advanced infantry training includes preparing Soldiers for the various types of infantry, such as mechanized (tanks and Bradley Fighting vehicles), light (Stryker vehicles, foot-soldier platoons), airborne (paratroopers), air assault (gunships), and rangers (specialists). The BCT would train on the Light Infantry ranges, and practice light maneuvers on the training areas that currently exist at Fort Benning. Training requirements would be met by expanding the times in which training areas and ranges are scheduled and condensing the space allocated to allow more units to train concurrently within a given range or training area. However, these techniques of increasing throughput would not be allowed to compromise safety or standard operating procedures already established for the ranges and training areas. Existing environmental controls and monitoring for environmental effects for these areas would continue.

Chapter 4 presents the potential environmental consequences of the addition of the BCT for each of the resources discussed in Chapter 3. A comprehensive matrix comparing the no-action alternative and the proposed action alternatives by resource and potential impacts is provided in Table 6-1. Cumulative effects of the BCT when considering past, present, and foreseeable future actions are presented in Chapter 5.

4.1 NATURAL ENVIRONMENT

4.1.1 Soils

Potential adverse effects to soils could result from ground disturbance leading to soil erosion, fugitive dust propagation, sedimentation, and pollutants such as hazardous materials and/or waste. Effects to soils are most likely to occur from construction activities, although effects due to post-construction operations including those in the ranges and training areas are also considered. Impacts to soils are considered significant if any ground disturbance or other activities would violate applicable Federal or state laws and regulations, such as the Georgia Erosion and Sedimentation Control Act (ESCA), and the potential for Notices of Violation (NOV) for the failure to receive applicable state permits, such as a NPDES construction permit under the ESCA, prior to initiating a proposed action.

For the alternatives, stream areas would be avoided; however, if disturbance is deemed unavoidable during construction and design phases, the appropriate permits (e.g., Section 404) would be obtained.

Alternative I: North, East, and South Harmony Church

Construction of the BCT facilities at the Alternative I site would result in the displacement of soil as a part of earthmoving and cut-and-fill operations for both the construction of the facilities (to include grubbing for roads and buildings) and the trenching for the underground utility lines to support the facilities. Construction would also include the clearing of trees, brush, and shrubs from the sites. Merchantable timber would be sold via a timber sale contract controlled by Fort Benning's Land Management Branch. All timber removal contracts would be conducted in accordance with Georgia Forestry Commission best management practices (BMPs) for timber harvests. Any remaining non-commercial vegetative debris would be removed under separate Fort Benning contract. All slash removal contracts would be conducted in accordance with the ESPCP Plan under the Construction NPDES permit, described in the next paragraph, and other standard BMPs to control erosion and sedimentation. Temporary construction activities may result in the migration of airborne or waterborne soil particles and petroleum, oils, and lubricants (POLs) onto adjacent lands and streams, which could contribute to sedimentation of off-site areas. For POLs, Fort Benning would require use of fueling and maintenance practices as well as spill counter measures to prevent contamination of soil. Also, efforts would be made during the construction process to reduce the number of construction exits, which would result in less earth moving and vegetative removal.

Adherence to the ESPCP under the construction NPDES permit is required and would include measures to minimize impacts to soils. Construction of the BCT facilities requires the preparation, certification, and submission of an ESPCP to the GA EPD as part of the NPDES construction permit process. Some of the components of the ESPCP include a project description, soil information, changes to existing contours, existing drainage patterns, BMP locations, detailed drawings, and a timeline or construction schedule. As part of the ESPCP, SPCC Plan measures are required during construction activities to prevent and/or minimize spill/release from hazardous materials into ground surfaces. During construction, the NPDES permit would require daily, weekly, and monthly inspections and reports. This standard set of measures would help minimize the effects of this alternative from construction activities.

All practices and BMPs for erosion and sedimentation control would be designed and implemented in accordance with the Manual for Erosion and Sediment Control in Georgia. BMPs specified in the ESPCP could include erosion control matting, channel stabilization, silt fencing, brush barriers, storm drain outlet protection, stone check dams, rock filter dams, construction exits, temporary and permanent seeding, and the application of mulch. The application of any or all of these BMPs would depend upon precise, specific ground conditions in the areas disturbed by construction. Erosion control matting, if needed, would be used on slopes greater than 2.5:1. Silt fencing, stone check dams, and rock filter dams represent the types of measures used to trap sediment on the site. Gravel exits, or similar measures, could be used at construction exits to reduce transport of mud from construction vehicles traveling from the site to existing paved roads. Unpaved roads that provide access to the BCT facility sites may not require controlled construction access points. Potentially, the disturbed areas could be seeded with temporary and permanent grasses to stabilize them.

Other BMPs potentially applicable during the construction phase to address soil and sedimentation effects could include: buffer zones, dust control on disturbed areas, streambank stabilization, construction road stabilization, and storm drain outlet protection. The selected construction contractor would be responsible for continuously maintaining all erosion and sediment control measures during the construction phase of the project.

Facilities involving the use and storage of hazardous materials would be designed to meet SPCC requirements under AR 200-1, as well as state and Federal requirements as applicable. These facilities include, but are not limited to, maintenance facilities, loading/unloading operations areas, hazardous material and POL storage areas (above/underground facilities), and generators. Design requirements of these facilities would include: secondary containment and/or diversion structures; and spill supplies and equipment to mitigate spills and/or releases. These measures would prevent and/or minimize soil contamination from possible discharge of pollutants into the environment.

Post-construction BCT activities also would result in minimal potential for adverse effects to soils. Maintenance on modular buildings, roads, trails, and vehicles would potentially result in additional ground disturbance. Travel to and from the new BCT facilities to and within ranges and training areas would result in vehicles disturbing soil on the side of paved or unpaved roads, and equipment disturbing soils in ranges and training areas resulting in potential erosion and fugitive dust emissions (discussed in more detail in Section 4.2.9, Air Quality). Permanent and temporary stabilization of disturbed areas would also help control dust from exposed soil surfaces.

Training vehicles have the potential to leak or spill POLs onto the soils, resulting in potential soil contamination concerns, but the vehicles are required to have drips pans underneath when parked to minimize POL spills. Military units are also required to utilize secondary containment for the storage of hazardous materials/wastes and during refueling operations. These and other requirements of the SPCC would be followed. Also, routine maintenance of the vehicles would help to identify and repair any conditions that might cause POL leaks. A spill response protocol has been established Post-wide and personnel on the range should have adequate spill response supplies on hand. Maintenance activities within ranges and training areas would also continue, resulting in the same level of ground disturbance and the same potential for POL spills from the maintenance vehicles themselves. During range safety and maintenance inspections, personnel would continue to check for areas of erosion, spill, and other environmental concerns and take appropriate actions. Implementation of applicable Federal and state laws and regulations and already-established Installation policies and guidelines, such as erosion control BMPs and spill control measures, would repair or minimize potential effects to soils as a result of this alternative, resulting in temporary, minor adverse potential effects only.

Overall, this alternative would result in a minor potential for adverse effects to soils. Implementation of appropriate BMPs and measures after construction for potential soil erosion would likely reduce effects of operations and BCT activities on the ranges and training areas.

Alternative II: East Harmony Church

Construction of the BCT facilities at the Alternative II site also would result in the displacement of soil as a part of earth moving and cut-and-fill operation for both the construction of the facilities (to include grubbing for roads and buildings) and the trenching for the underground utility lines to support the facilities. Construction activities would include the clearing of trees, brush, and shrubs. Like Alternative I, development of the Alternative II site would be designed to minimize potential soils impacts by minimizing earth moving and vegetation removal.

Adherence to an ESPCP as well as the NPDES permit would be accomplished as described for Alternative I. BMPs such as those indicated for Alternative I would be implemented to minimize impacts to soils from erosion, sedimentation, and spills. Potential for effects to soils during post-construction activities including activities in ranges and training areas would be the same as described for Alternative I.

Overall, this alternative would result in a minor potential for adverse effects to soils. Like Alternative I, appropriate BMPs and other measure would reduce the effects of operations and other activities.

Alternative III: No Action

The no-action alternative would have no impact on current soil conservation measures because no new construction would occur. Current activities that occur within the proposed Alternative I and II sites would continue. Potential for effects to soils from activities in ranges and training areas would be the same as described for Alternative I. Therefore, this alternative would result in a minor potential for adverse effects to soils.

4.1.2 Water quality

Waterways that could be affected by this proposal include: Heriot Creek, Ochillee Creek, Victory Pond, McMurrin Branch, Harps Creek, Mill Creek, and associated unnamed tributaries leading to them. In addition, a number of drainages within the ranges and training areas that lead to TMDL streams could be affected. Ground water resources include the water supply wells and large aquifers underlying Fort Benning and the greater surrounding Sand Hills area. Although no National Wetlands Inventory wetlands occur within Alternatives I or II, the wetlands north of and adjacent to Alternative I would be evaluated and avoided in the design and construction processes.

Adverse effects to water resources could result from erosion, runoff, and surface contamination from pollutants such as hazardous materials and/or waste. Effects to water are most likely to occur from construction activities. Impacts to water resources could potentially occur if implementation of one of the alternatives resulted in changes to water quality or supply, threatened or damaged unique hydrologic characteristics, or violated established laws or regulations.

The threshold level of significance for water quality is the violation of applicable Federal or state laws and regulations, such as the Clean Water Act and the Georgia Water Quality Control Act, and the potential for NOV for the failure to receive applicable Federal and state permits, such as a NPDES permit (required for all projects 1 acre or more in size), prior to initiating site development activities. This also includes not following management practices for "impaired streams," as defined under Georgia's 303(d) List, for TMDLs. Upatoi Creek, Little Pine Knot Creek, and Pine Knot Creek are three stream segments in the area that are known to be impaired due to sedimentation. The Lower Chattahoochee River is impaired due to fecal coliform.

Fort Benning's proposal does not involve construction or alteration to streambanks. However, if such areas were affected, the threshold level for significance to streambanks is any action requiring a stream buffer variance under the Georgia ESCA. Fort Benning would continue to apply Installation-wide BMPs to limit sedimentation into streams and to limit degradation of streams with TMDLs. In addition to the examples list in Chapter 3, additional BMPs include:

- No disturbance or construction-related activities will occur within a minimum of 25 feet from perennial streams, and buffer zones will be marked. Logging decks and defined skid trails will be located outside the buffer zones unless a variance is granted (e.g., some stream crossings).
- In areas adjacent to waterways, tree clearing will be accomplished using low impact methods in accordance with the Georgia Forestry BMPs for Water Quality and Timber Harvesting.
- Pollution of nearby storm drainages and waterways will be minimized by ESPCP and SPCC BMPs such as secondary containment, drip pans, and minimum material exposure.

Alternative I: North, East, and South Harmony Church

Construction of the BCT facilities at the Alternative I site could create potential temporary minor adverse effects on water quality, primarily due to potential sedimentation of adjacent streams from tree clearing, grading, and construction activities. All streams and tributaries listed previously in the introduction to this section have the potential to be affected by Alternative I because the site is spread over a broader area than Alternative II. If this alternative were chosen, Fort Benning would implement BMPs and other measures to minimize impacts to water quality. There are no known wetlands in the area of or adjacent to Alternative I, so they would not be affected.

Adherence to applicable Federal and state laws and regulations as well as Installation policies and guidelines is required and would minimize impacts to surface and ground water quality. All tree clearing and construction activities greater than 1 acre in size and/or as part of a common development area, such as this Alternative I action, require a NPDES General Permit for Storm Water Discharges under the ESCA. A Notice of Intent (NOI) for construction-related storm water discharge would be submitted to the GA EPD to meet these requirements. As a standard practice, Fort Benning would prepare and implement an SPCC Plan and its requirements during construction activities to prevent and/or minimize spill/release from hazardous materials into waterways. Erosion control BMPs, as discussed previously, would be applied as necessary and practicable to minimize the deposition of sediments into adjacent surface waters at the site of

disturbance. As part of the NPDES permit, water samples would be collected during construction to document any changes in turbidity. If turbidity increases, additional BMPs may be required.

Design and construction of facilities where hazardous materials would be used and stored would meet SPCC requirements under AR 200-1, as well as state and Federal requirements as applicable. Design requirements for these facilities would include secondary containment and/or diversionary structures. Contingency plans along with availability of spill supplies and equipment would mitigate any spills and releases. These measures would prevent and/or minimize surface and ground water contamination from possible discharges of pollutants into the environment.

Construction would also entail the extension, replacement, or addition of storm water drainage infrastructure through digging of trenches, either from existing lines along the nearest road or other primary locations. Trenches could also run from new buildings, roads, and parking lots to discharge points in existing systems or additional locations in local drainages. Although these areas would be avoided during the design process, any work involving construction or excavation in, over, or under streams would need authorization from the Corps of Engineers, under the CWA and other requirements. Sustainable design measures also would be implemented to minimize impacts from additional storm water discharges. Any facilities constructed for industrial operations, such as vehicle maintenance shops, would be designed to meet SPCC requirements under AR 200-1, as well as applicable state and Federal requirements, and include oil water separators in those portions of the storm water system. Such measures for utility systems would reduce the potential for adverse impacts from the storm water system.

Any new water supply lines would have a backflow preventer and water meter installed, and would be disinfected following American Water Works Association methods as required by Georgia Drinking Water Rule 391-3-5. During construction and subsequent facility use, all waste water discharges would be connected to the sanitary sewer system per Georgia Drinking Water Rule 391-3-6.

Post-construction BCT activities could result in a potential effect to water, if mechanized and maintenance vehicles disturb ground along paved and unpaved roads leading between the new facilities and within the ranges and training areas. Addition of the BCT activities to existing training exercises utilizing troops and mechanized vehicles within ranges and training areas would occur under Alternative I. This would result in a slight increase in the potential for temporary minor adverse effects to water quality due to sedimentation of adjacent streams and/or POLs migrating to off-site streams in the areas utilized by the new BCT training. Routine maintenance of these ranges and training areas could have similar effects, but to a lesser degree. To reduce potential for spills and leaks as a result of training activities, military units would follow requirements to utilize secondary containment for storage of hazardous materials/waste and refueling operations. Also, units are encouraged to locate all refueling operations and storage of hazardous materials/waste away from waterways. In addition, during training at ranges, units and commanders would follow well head protection plans (required by Georgia Drinking Water Rule 391-3-5) for range water supply wells. Potential impacts to stream habitats and surface and ground water quality caused by post-construction activities would be reduced by continued compliance with regulatory requirements, and the implementation of existing erosion control

BMPs and spill control measures. With respect to impaired streams (TMDLs), this alternative may also result in increased management practices to prevent additional stream impairment from sedimentation and fecal coliform; however, no impacts to impaired streams are predicted.

Overall, potential minor adverse effects to water quality may result from this alternative. Use of BMPs during and after construction would minimize effects to water quality.

Alternative II: East Harmony Church

Construction of the BCT facilities at the Alternative II site would be similar in nature and scope to those predicted under Alternative I; however, fewer drainages have the potential to be affected within the Alternative II site because the site is not as broad as Alternative I. Those that could be affected are east of Highway 27/280 and include Ochillee Creek and Victory Pond, and associated unnamed tributaries leading to them. Portions of two palustrine wetlands are adjacent, but outside of, the area designated for 1,482 modular barracks spaces as shown in Figure 2-4. These areas would be avoided during design and construction and measures would be taken to ensure no disturbance to these areas.

Applicable Federal and state laws and regulations and Installation policies and guidelines regarding surface and ground water quality would be adhered to as described for Alternative I. Erosion control BMPs, as discussed for Alternative I, would be applied to minimize the deposition of sediments into adjacent surface waters at the site of disturbance. Storm water systems would be designed and sited to reduce potential for adverse impacts.

Post-construction BCT activities could result in similar impacts as described under Alternative I, but Alternative II would have a reduced potential for minor adverse effects to water within the Alternative II site. The Alternative II site overlaps fewer existing streams and, therefore, the potential for additional acres of soil disturbance from vehicles would be decreased. Through adherence to regulatory requirements and the implementation of erosion control BMPs, stream habitats and water quality should improve over time. Within ranges and training areas, impacts to water quality would be the same as those described for Alternative I.

Overall, potential minor adverse effects to water quality may result from this alternative. Use of BMPs during and after construction would further minimize effects to water quality.

Alternative III: No Action

Under the no-action alternative, no new construction would be required. Impacts to water quality would be limited to those resulting from activities in ranges and training areas, and additional Soldiers utilizing Installation water supply and treatment facilities. These conditions would be the same as described for Alternative I. Overall, potential minor adverse effects to water quality may result from this alternative. Use of BMPs during and after construction would further minimize effects to water quality.

4.1.3 Biological Resources

The threshold level of significance for Federally protected species occurs if an alternative disrupts normal behavior patterns or disturbs habitat at a level that substantially impacts the Installations ability to either avoid jeopardy or conserve and recover the species. The threshold level of significance for state protected species is an impact that would either jeopardize future existence of a state listed species on Fort Benning or lead to the Federal listing of that species.

Implementation of the proposed action would incorporate the following management practices, thereby minimizing potential effects on biological resources.

- Facilities and supporting infrastructure to be constructed will be sited on previously disturbed ground to the maximum extent possible. Removal of longleaf and loblolly pine will be minimized. Erosion control plans (noted above) will specifically address the control of sedimentation to avoid degradation of RCW habitat. The Installation Soil Conservationist and RCW specialist will be provided draft site construction plans for review and comment, and the final site plans will incorporate their recommendations to the maximum extent possible.
- Construction will not occur within 1/8 mile (200 meters) – or other distance deemed necessary by the Installation RCW specialist – of an active RCW cluster during the nesting season (March-July).
- Construction and use of the proposed facilities will not impede RCW management activities in surrounding areas.
- Prior to ground disturbance in areas where gopher tortoise may occur, a qualified biologist will search for occupied burrows of the gopher tortoise in areas subject to construction and will relocate tortoises to a safe location. Where tortoises are known to occur in close proximity to construction areas, fencing or other barriers to keep the animals out of harm's way will be installed.

For either alternative, the use of ranges, training areas, roads, and infrastructure would increase by approximately the same amount relative to existing conditions. There would be a corresponding increase in potential disturbance to wildlife. Increased activity within already disturbed areas, i.e. developed areas and established roads, would not significantly affect biological resources given the ongoing activity to which they are exposed. An incremental increase in noise around established firing points and within impact areas is not expected to significantly affect wildlife already subject to similar impacts within those areas. Activities will be conducted in accordance with USAIC 210-4 (Range and Terrain Regulation), guidelines and restrictions stated in the INRMP (U.S. Army 2001a), the RCW ESMP, mitigation measures developed in the DMPRC EIS (U.S. Army 2004), and the terms and conditions of the USFWS Biological Opinion (BO) on the effects of the DMPRC on RCW (USFWS 2004). These existing procedures ensure the compatibility of training activities with the sensitive biological resources of the Installation. As a result the increase in activity associated with the proposed action would not have a significant impact on biological resources.

Project impacts would primarily result from the construction and subsequent use of the new facilities and infrastructure within the identified footprint of either Alternative I or Alternative II. Although exact facility placement and construction-area requirements have not been determined, each alternative site footprint is large enough to accommodate the facilities and all the necessary work areas, including construction staging and materials stockpiling that would be required. Standard BMPs would control erosion and sedimentation, limiting the potential for offsite effects and degradation of surrounding habitat.

At either alternative site, construction activities would entail ground disturbance and vegetation removal over much of the site. Noise and activity during construction would result in disturbance to wildlife primarily within the site footprints. Subsequent occupation and use of either site would result in the continuation of disturbed/altered conditions throughout much of the construction area for the period in which the temporary facilities remain in place.

Alternative I: North, East, and South Harmony Church

The footprint of Alternative I occupies approximately 247 acres, 85 acres of which are developed or otherwise altered, and 69 acres of which are pine plantations. The remaining area is forested. Altogether about 129 acres of longleaf and/or loblolly pine-dominated forest (including some of the planted areas) identified as foraging habitat for the RCW are overlapped by Alternative I. No wetlands are present. The loss of vegetation and wildlife habitat within this area would not be significant given the abundance of similar habitat in surrounding areas.

Alternative I overlaps foraging habitat of active RCW clusters HCC-11, HCC-10, and a very small area of HCC-03. Since HCC-03 is overlapped to a much greater degree by Alternative II, it is discussed in that subsection. Alternative I also overlaps inactive cluster HCC-14. The foraging habitat analyses for these clusters follows below (prepared by M. Barron).

Cluster HCC-11 will loose approximately 29 acres of habitat. It currently has 263 acres of available foraging habitat with 116.4 acres within a quarter mile of the cluster center. The removal will leave the cluster with 234 acres. The cluster currently has 94 acres of good quality habitat, 150 acres of medium quality habitat, and 19 acres of low quality habitat. The project will remove 23 acres of good quality habitat, leaving it with 71 acres of good quality habitat. An additional 6 acres of medium quality habitat will be removed. Six acres of this total will be removed from the quarter mile foraging circle, none of which is considered good quality habitat. The quarter mile foraging circle currently has 23 acres of good quality foraging habitat available. This will not be reduced. All acres within the foraging circle are contiguous. The habitat removal will not impact the contiguity of the habitat. Even though the project will impact some of the best acres, the total acres available to the cluster will be sufficient to support the cluster. Additionally, since the habitat will still be contiguous, it is not anticipated that the demographics of the birds in the area will be impacted. Since this cluster will not have a minimum of 120 acres of good quality habitat, Fort Benning, in accordance with its INRMP, will monitor the cluster for a period of five years and work with the contractor to limit the number of acres that will be impacted by the project. Additionally, Fort Benning will continue to burn and do forestry work to improve the remaining habitat.

Cluster HCC-10 will loose approximately 15.5 acres of habitat. It currently has 375 acres of available foraging habitat with 100 acres within a quarter mile of the cluster center. The removal will leave the cluster with 359.5 acres. The cluster currently has 177 acres of good quality habitat and 198 acres of medium quality habitat. The project will remove 14.5 acres of good quality habitat, leaving it with 162.5 acres of good quality habitat. An additional 1 acre of medium quality habitat will be removed. 3.5 acres of this total will be removed from the quarter mile foraging circle, all of which is considered good quality habitat. The quarter mile foraging circle currently has 55 acres of good quality foraging habitat available. This will be reduced to 51.5 acres. All acres within the foraging circle are contiguous. The habitat removal will not impact the contiguity of the habitat. Even though the project will impact some of the best acres, it will not be reduced below 120 acres. Additionally, since the habitat will still be contiguous, it is not anticipated that the demographics of the birds in the area will be impacted. This cluster should not be adversely impacted by the project.

Cluster HCC-14 was established in 2001 as a primary recruitment cluster. It has shown signs of activity since it was installed, but has never housed a potential breeding pair. Since it is inactive, a foraging analysis was not conducted for the cluster. However, a breakdown of the foraging acres and what would be removed is provided. The cluster currently would have 282 acres of available forage. The project would remove 42.9 acres of habitat, leaving it with 239.1 available acres. 22.9 acres would be removed from the quarter mile foraging circle, reducing the available habitat within this circle from 79.5 acres to 56.5 acres. The projected habitat removal will come close to the current cavity trees. Fort Benning will monitor the tree removal in this area to make sure that the cavity trees are not disturbed, and also will consider shifting the cluster if necessary and if suitable cavity-size trees can be located nearby. The cluster should have enough available forage to make it a viable site for habitation.

As discussed above, the removal of relatively small areas of RCW foraging habitat is not expected to reduce the viability of active or potentially active clusters. Continuing implementation of management practices as provided in the RCW ESMP, the INRMP (U.S. Army 2001a), and terms and conditions of the DMPRC BO (USFWS 2004), ensure that the proposed BCT action is not likely to adversely affect the RCW. Direct effects or "take" of individuals are not likely to occur, and effects on RCW would not be significant.

Management practices (e.g., relocation) would minimize the possibility of mortality to gopher tortoises on or adjacent to the site, resulting in no significant impact on that species. Although the migrant loggerhead shrike is known to occur at this location, it is not expected that project implementation would substantially reduce the availability of the open woodland and edge habitat favored by this species.

Overall, potential minor adverse effects to biological resources may occur if Alternative I were implemented. Use of BMPs would help reduce any impacts.

Alternative II: East Harmony Church

The footprint of Alternative II occupies approximately 238 acres, 51 of which are developed or otherwise altered. Another 50 acres of planted pines are present. The remaining area is forested,

including about 59 acres of longleaf and/or loblolly pine-dominated forest identified as foraging habitat for the RCW. Small areas (less than 4 acres) of wetland vegetation are present at the northern edge of the site footprint, but no construction-related activities would be allowed in the immediate vicinity of this wetland vegetation so these communities would not be affected. The loss of vegetation and wildlife habitat within the Alternative II area would not be significant given the abundance of similar habitat in surrounding areas.

Foraging habitat for active RCW Clusters HCC-03 is overlapped by Alternative II. The foraging habitat analysis (prepared by M. Barron) is presented below.

Cluster HCC-03 will loose approximately 16 acres of habitat. It currently has 219 acres of available foraging habitat with 91 acres within a quarter mile of the cluster center. The removal will leave the cluster with 203 acres. The cluster currently has 140 acres of good quality habitat and 79 acres of medium quality habitat. The project will remove 14 acres of good quality habitat, leaving it with 126 acres of good quality habitat. An additional 2 acres of medium quality habitat will be removed. 3 acres of this total will be removed from the quarter mile foraging circle, 2 acres of good quality habitat and 1 acre of medium quality habitat. The quarter mile foraging circle currently has 57 acres of good quality foraging habitat available. This will be reduced to 55 acres. All acres within the foraging circle are contiguous. The habitat removal will not impact the contiguity of the habitat. Even though the project will impact some of the best acres, it will not be reduced below 120 acres. Additionally, since the habitat will still be contiguous, it is not anticipated that the demographics of the birds in the area will be impacted. This cluster should not be adversely impacted by the project.

As discussed above, the removal of relatively small areas of RCW foraging habitat is not expected to reduce the viability of active or potentially active clusters. Continuing implementation of management practices as provided in the RCW ESMP, the INRMP (U.S. Army 2001a), and terms and conditions of the DMPRC BO (USFWS 2004), ensure that the proposed BCT action is not likely to adversely affect the RCW. Direct effects or "take" of individuals are not likely to occur, and effects on RCW would not be significant.
The potential effect on RCW habitat is somewhat less at Alternative II than Alternative I. In either case, effects on RCW would not be significant. No other special-status species are known to be present at the Alternative II site.

Overall, potential minor adverse effects to biological resources may occur if Alternative II were implemented. Use of BMPs would further reduce impacts on biological resources.

Alternative III: No Action

If no action is taken, there would be no change to biological resources from current conditions. Existing uses of the land as well as conservation measures to sustain biological resources on the Installation training and range areas would continue.

4.2 HUMAN ENVIRONMENT

4.2.1 Land Use

The threshold level of significance for land use is the potential for the proposed action and alternatives to change the land use in such a manner as to cause incompatibility with adjacent land uses. The threshold level of significance relating to ranges and training areas is encroachment sufficient to interfere with the Installation mission so that mission-essential training is degraded

Alternative I: North, East, and South Harmony Church

Construction of the BCT facilities within the Alternative I site would be consistent with existing and planned land use at this site. This site is proposed based on the comprehensive review during the 2004 environmental planning charrette. Although there would be some conversion of land uses in the Alternative I area from a more natural setting to buildings and associated structures, operations would remain consistent with existing land use in these areas and would not constitute a significant impact. Potential land use issues resulting from activities in ranges and training areas include encroachment on military training if future construction occurs near the Installation's northeastern boundary. The requirement to notify the Installation of such future construction will allow an identification and cooperative resolution of any incompatible land uses. Operations at ranges that would be utilized by the BCT are not currently impeded by encroachment; however, as discussed in the Noise Section (4.2.10), Zone III (incompatible) noise contours would extend an additional 3,280 feet into rural residential areas off the Installation. Overall, there is a potential moderate adverse effect on land use as a result of this alternative.

Alternative II: East Harmony Church

Within the Alternative II site, construction of BCT facilities also would be consistent with existing and planned land use at this site. This site also underwent review for consistency with existing land use plans during the environmental planning charrette. The Military Police Academy dog kennel would need to be moved to a location to be determined by the Military Police Academy in coordination with the Garrison Commander. The Bradley driver's training course would be moved to Suitor Hill where a larger version of the same type of course already exists. These relocated facilities would remain compatible with the land uses at their new locations. Although some land uses would change from a more natural setting to buildings and associated structures, operations would remain consistent with existing land use conditions in the Alternative II area and would not constitute a significant impact. Impacts to land use as a result of activities in ranges and training areas would be the same as described for Alternative I.

Alternative III: No Action

Under the no-action alternative, existing Fort Benning activities within the Alternative I and II sites would remain the same and land use would remain as described in baseline conditions for these areas. No adverse impacts to land ownership, management, or use patterns would occur. Because training would occur in existing ranges and training areas with the no-action alternative,

effects to land use in ranges and training areas would be the same as those described in Alternative I, and potential moderate adverse effects to land use would occur.

4.2.2 Recreational Resources

This section addresses potential effects of the alternatives on the use and characteristics of recreational areas. Potential for changes in recreation use and access is analyzed, as well as the potential loss of recreational land. Usually recreation issues or concerns arise when there could be direct effects on or overcrowding of recreational facilities or impacts to recreation from noise. The threshold level of significance for recreation is exceeded when demand for recreation activities and facilities cannot be met or the recreation experience significantly declines because of overcrowding or noise.

Alternative I: North, East, and South Harmony Church

Changes to use of recreational facilities are expected as a result of Alternative I. Personnel would increase and generally participate in recreational activities so current demand for such facilities would increase. Additional personnel and their dependents would likely utilize recreational resources in patterns similar to those currently occurring on the Installation. In general, the increased demand would be accommodated via existing facilities and addition of temporary recreational and physical fitness facilities associated with Alternative I. Fort Benning's MWR Office anticipates adequate on-Post capacity to provide clubs, child care and before/after school programs, libraries, auto skills facilities for personal maintenance/repair of vehicles, and outdoor and other recreational programs (golf, bowling, etc.) (personal communication, Addison 2004). Other anticipated needs would be met through planned temporary BCT facilities. Thus, adverse effects from increased demand for recreational facilities would be minor.

One existing recreational facility, the pistol club shooting range, would be relocated as a result of Alternative I. The relocation would be to a designated special use space that has served as a pistol range for Soldier firing and is located alongside the Simpson Range. No adverse impacts from recreation noise are expected due to the relocation of the pistol club because the relocation area is already used for such activities. The designated use for this range would also change from pistol firing range to modified record firing range. There would be no additional noise impacts from this change in designated use.

Recreational areas and opportunities for hunters and fisherman may decrease in the immediate area of the new BCT facilities and support facilities. The conversion from a relatively undeveloped, forested area to a mostly developed BCT area with its associated support facilities and access roads would have potential minor adverse effects to recreation, to include hunting, fishing, hiking, and bird-watching.

Recreational areas and opportunities for hunters and fisherman may also be altered by increases in operational use of ranges and training areas by the new BCT. Increased use has the potential to make training ranges less desirable for fish and waterfowl. Noise associated with increasing use at training ranges may result in disturbances to game species, which could impact seasonal hunting availability, although changes are consistent with current noise and activity levels in

these areas. Changes to recreation use patterns may result from recreationists' annoyance with noise effects associated with an increase in activities at existing ranges and training areas, including extension of Zone III contours an additional 3,280 feet off the eastern installation boundary. Overall, effects to recreational opportunities in the training ranges would be moderately adverse, but not significant.

Operational tempos in training fluctuate regularly at Fort Benning because the units stationed there are highly deployable. Initially, the addition of the 5th BCT would not reduce the available acreage in training areas that are available for recreational uses because the 3rd BCT is currently deployed to Iraq. However, availability of undeveloped recreational opportunities such as hunting, fishing, and bird watching would decrease when the 3rd BCT returns from Iraq. This is discussed further in Chapter 5, Cumulative Effects.

Alternative II: East Harmony Church

Effects from Alternative II would be similar to those described for Alternative I. Increased demand for recreational facilities would be accommodated by existing facilities and addition of temporary recreational and physical fitness facilities resulting in minor adverse effects to recreational facilities. The pistol club shooting range would not be relocated under Alternative II. Changes in the area of and immediately surrounding the proposed BCT facilities would result in minor adverse effects to hunting, fishing, hiking, and bird-watching. In addition, increased use of training areas by the additional BCT soldiers would result in the same effects as Alternative I including decreased hunting availability and potential changes to recreation use patterns. Therefore, effects to recreational opportunities in the training ranges would be moderately adverse, but not significant.

Alternative III: No Action

Existing recreational resources would remain the same as described under baseline conditions under the no-action alternative. Additional facilities would not be built to support the increase in soldiers training at Fort Benning and the increase in accompanied soldiers and their dependents living in existing on-post housing. As a result, overcrowding at existing facilities may result in a moderate adverse effect to recreation from Alternative III. Demand for limited training/hunting areas would remain high. Availability of undeveloped recreational opportunities would remain relatively similar to existing conditions, but be reduced when the 3rd BCT returns from Iraq (see Chapter 5, Cumulative Effects). Impacts to ranges and training areas would be the same as described for Alternative I. Therefore, effects to recreational opportunities in the training ranges would be moderately adverse, but not significant.

4.2.3 Socioeconomics

Analysis indicated that BCT facilities and training would represent a minor positive input into the local community. The threshold level of significance for socioeconomics consists of a combination of several factors, to include unusual population growth or reduction, unusual decrease in demands on housing and public services, and the potential to substantially increase/decrease employment opportunities.

Alternative I: North, East, and South Harmony Church

Population. Implementation of Alternative I would result in an additional 3,400 Soldiers at Fort Benning. It is projected that 53 percent of these Soldiers would be accompanied by spouses and/or children, and the remainder would be single. Thus, 1,802 families would move to the region as part of this alternative. Based on the average number of dependents per military personnel, there would be an increase of 5,550 dependents, for a total population increase of 8,950 by Fall 2005 (personal communication, Addison 2004). This number would represent a 15.3 percent increase in the total population associated with active duty military personnel at the Installation and a 3.3 percent increase in the Columbus MSA's total population. This minor increase in population would not place noticeable additional demands on affected communities.

Housing. Modular barracks spaces that would be constructed as part of Alternative I would support the additional unaccompanied Soldiers expected to live on post. Fort Benning anticipates that two-thirds of the new families associated with the BCT will live off post, with the remaining 601 families requiring on-post housing. Fort Benning currently has 4,000 residential units in family housing. Availability of military housing at Fort Benning depends on the type of housing desired. Currently, there is a 2- to 4-month wait for on-post three-bedroom enlisted housing and a 12- to 18-month wait for on-post three-bedroom field grade officer housing. However, there are approximately 200 vacant homes with two to four bedrooms. Based on housing estimates, Fort Benning anticipates availability of adequate on-post housing (personal communication, Burns 2004). Adequate affordable housing off post in the nearby communities also exists to support the new BCT when the basic allowance for housing is compared with availability in the region (personal communication, Burns 2004).

Employment and Taxes. Construction of the new BCT facilities could temporarily increase job opportunities for individuals living and/or working in the Columbus MSA, resulting in potential temporary minor positive input into the local economy. The construction contract may be awarded to a company located outside of the Columbus MSA; however, there is still the potential for utilization of the local workforce for the actual work on site. It is not known at this time the number of construction workers that would be employed as a result of this project; however, utilization of the local workforce should not increase demands on housing or public services and should not result in an increased population base.

As of September 2004, over 37,000 military and civilian employees comprised the workforce at Fort Benning. As one of the largest government employers in the Columbus MSA, Fort Benning and its continuing operations represent a significant source of regional economic activity. The addition of 3,400 jobs at Fort Benning, increasing military personnel by 11.6 percent, combined with indirect employment opportunities created by increased demand for goods and services, would beneficially affect employment in the region. Tax revenues would increase proportionally, especially through sales taxes. Alternative I would result in additional non-military employees at the site as well, further increasing economic opportunities. These additional employees are expected to be added over a four year period from fiscal year 2005 (FY05) through FY09 (personal communication, Caldwell 2004). The employment opportunities would provide a moderate beneficial effect on employment and economic growth.

Schools. Under Alternative I, if every additional accompanied soldier has a spouse and the remainder of dependents are school-age children, there would be a total increase of 3,748 school-aged children. Two-thirds of these would live and attend schools off-post, while the remaining one-third would attend on-post schools. Given the current pre-school to eighth grade enrollment of 3,200 students in the Fort Benning Dependents Schools located on post, this would result in an increase of nearly 40 percent. However, it is unlikely that all dependents are school-age children between pre-school and eighth grades. Fort Benning planning efforts are underway to prepare for the additional needs associated with the BCT (personal communication, Cockerell 2004), including ensuring adequate capacity for on-post schooling of military dependents. Excluding the 18 private and parochial schools available off-post, there are currently nearly 34,000 students enrolled in the surrounding off-post public school systems. If all off-post non-spouse military dependents associated with Alternative I attended only the public schools, this would result in just over a 7 percent increase in current enrollment. Again, it is unlikely that all dependents would be school-aged children. Fort Benning is actively working with community partners to ensure community preparedness for the new BCT (personal communication, Cockerell 2004), including adequate capacity for military dependents at community schools. Overall, there could be moderate effects on schools in the short term, but with the actions being taken for community preparedness, there would be no long-term adverse effects to schools as a result of Alternative I.

Environmental Justice. Environmental justice analysis was conducted to determine whether or not potential environmental impacts related to Alternative I would result in any disproportionately high and adverse impacts to minority and low-income populations within the region. Based on the analysis provided in previous sections, no significant adverse impacts should occur as a result of Alternative I. Although Soldiers and their families may compete for housing with the existing community, the current vacancy rates in the area and ongoing and planned housing construction should not result in adverse impacts to minority or low-income populations (personal communication, Cockerell and Hadden 2004). Although the Zone III noise contours would extend 3,280 feet further into northern Marion County, census data do not exist for the specific areas affected. However, these areas are already subject to training noise and the noise increase in this rural area without sensitive noise receptors is not expected to result in significant adverse effects. Thus, there would be no disproportionate adverse effects to minority or low-income populations as a result of this alternative.

Alternative II: East Harmony Church

Socioeconomic effects as a result of implementation of Alternative II would be the same as those described for Alternative I. While the effects are a mixture of adverse and beneficial effects, overall minor positive effect would result.

Alternative III: No Action

If BCT support facilities are not built, there would be no construction and the temporary minor positive effect on the local economy from local construction jobs and expenditures would not occur. Population, employment, and school enrollment increases would be the same as described for Alternative I. However, all unaccompanied Soldiers would live off-post and a portion of the

civilian employees would work off-post because adequate facilities would not be available at Fort Benning.

To house unaccompanied Soldiers, Alternative III would involve leasing hotels in communities around Fort Benning and/or renting apartments or houses off-post. While this would be a positive economic input for the surrounding community, it would cost the military in excess of approximately $55,000.00 per day to house Soldiers in that manner. For the community to support long-term leasing of more than 10 percent of the hotel rooms, rooms currently used by visiting Soldier family members and other travelers would have to be taken out of the inventory, which would be a moderate adverse impact on other local military members and their families, as well as travelers. Office space would also need to be leased for the non-military employees lacking facilities on-post, which would result in similar impacts as leasing of hotels or apartments.

Overall, this alternative would result in moderate positive socioeconomic impacts to the local community with regard to employment; although additional construction-related jobs would not be present. As with Alternatives I and II, there would be no disproportionately high or adverse effects to minority or low-income populations as a result of the increased training activities. In terms of the additional number of soldiers living off-post and civilians working off-post with Alternative III, there would be short-term moderate adverse effects as vacancy rates in existing apartments are low. However, new units are currently under construction and in the long term, it is anticipate that there would be adequate housing, including affordable housing for minority and low-income populations (personal communication, Cockerell and Hadden 2004).

4.2.4 Cultural Resources

Cultural resources are subject to review under a number of Federal laws and regulations, including Section 106 of the NHPA of 1966 (as amended). Only cultural resources determined to be eligible or listed on the National Register are protected under the NHPA. In addition to affecting National Register listed or eligible resources, an alternative for implementing the proposed action that might affect traditional cultural properties protected under a number of other Federal laws and by DoD policy warrants consideration.

For cultural resources the threshold for significant impacts include any disturbance that may affect the integrity of a historic property or a cultural resource that has not yet been evaluated to determine its eligibility to the National Register.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may be the result of physically altering, damaging, or destroying all or part of a resource, altering characteristics of the surrounding environment by introducing visual or audible elements that are out of character for the period the resource represents, or neglecting the resource to the extent that it deteriorates or is destroyed. Indirect impacts are those that may occur as a result of the completed project, such as increased vehicular or pedestrian traffic in the vicinity of the resource.

Alternative I: North, East, and South Harmony Church

No archaeological resources have been identified within the Alternative I location. Therefore, no impacts to significant archaeological resources would occur.

Under Alternative I, seven structures would be demolished, reused, or moved. Of the seven World War II-era buildings, three would be demolished (buildings 4023, 4024, 4051, 4052, 4449) and two would be reused or demolished (buildings 4345, 4476). All seven of these buildings have been determined not eligible to the National Register and their demolition is covered under the 1986 Programmatic Memorandum of Agreement (PMOA 1986). Therefore, Alternative I would have no impact on National Register-eligible or listed buildings or structures.

No traditional resources or properties are known to occur in the Alternative I location; however, in accordance with DoD policy, Fort Benning has notified the appropriate Federally-recognized Tribes in Georgia and Alabama to request consultation on the proposed action. If concerns are expressed, Fort Benning will work with the Tribes to reduce potential effects to traditional resources. With these conditions, no significant impacts to traditional cultural resources would occur.

Alternative II: East Harmony Church

The area of Alternative II has been surveyed for archaeological and architectural resources. The surveys did not identify any archaeological resources within the Alternative II location (personal communication, Dr. Chris Hamilton 2004). No National Register-eligible architectural resources are located within Alternative II. Therefore, implementing Alternative II would have no impact on National-Register-eligible or listed archaeological or architectural resources.

No traditional resources or properties are known to occur in the Alternative II location; however, in accordance with DoD policy, Fort Benning has notified the appropriate Federally-recognized Tribes in Georgia and Alabama to request consultation on the proposed action. If concerns are expressed, Fort Benning will work with the Tribes to reduce potential effects to traditional resources. With these conditions, no significant impacts to traditional cultural resources would occur.

The ranges are located within various training areas grouped into complexes including, the Malone Range Complex, the Dixie Road Range Complex, and the CACTUS area.

Within the Malone Range Complex there are 12 ranges that would experience increased use under Alternative I located in Impact DUD areas M6 and one located in training area O12. The range in O12 has been surveyed for archaeological resources and none were identified. Portions of M6 are currently being surveyed for archaeological resources. However, this is not a usual practice. Normally the Impact DUD areas are being fired into continually and survey is not feasible. Also, due to the high degree of disturbance in the Impact DUD areas, they are considered extremely unlikely to contain National Register-eligible or potentially eligible sites.

Within the Dixie Road Range Complex, there are six ranges that would experience increased use under Alternative I. Four are in training area A4, one in training area A5, and one in training area A7. All of these areas have been surveyed for archaeological resources. No archaeological resources were identified.

Within the CACTUS area are nine artillery firing points and five mortar firing points. All of these areas with the exception of the firing point Concord training area K22, have been surveyed for archaeological resources and none were identified.

Alternative III: No Action

Under the no-action alternative, the construction, ground disturbance, and demolition activities would not occur. Therefore, no National Register–listed or eligible cultural resources or resources of concern to Federally-recognized Tribes in Georgia and Alabama would be affected as a result of construction ground disturbance, or demolition activities from Alternative III and no impacts to cultural resources would occur as a result of those activities. However, under this alternative, the increased training in the range and at the firing points would still occur. Therefore, there exists a potential for impacting National Register-eligible cultural resources at firing point Concord and within the M6 Impact DUD area, where survey has not been completed.

4.2.5 Transportation

Transportation resources would be affected by on-post construction and the increase in personnel; therefore, the transportation analysis focuses on the Fort Benning road network, including those roads that access the Installation. The threshold level of significance for transportation is impairment to emergency response efforts or impediment of traffic supporting the training and security mission.

Alternative I: North, East, and South Harmony Church

Implementation of Alternative I would affect transportation due to an increase in personnel and the planned on-post construction activities. Construction activities would begin as soon as regulatory approvals and funding are received. This may be as early as April 2005 and would continue on an accelerated schedule for completion by October 2005. This may result in temporary delays and creation of alternate traffic patterns. However, due to the temporary nature of the construction, the staggered construction areas, and the relative separate location from Main Post, only minor, insignificant impacts are anticipated.

Off-post transportation and traffic in the vicinity of Fort Benning could be affected by this alternative. By October 2005, 3,400 additional Soldiers and civilian personnel are anticipated. Civilian personnel would be employed in phases beginning in FY06 and continuing through FY09. It is assumed that all civilians and 2,266 Soldiers would live off post; therefore, there would be an increase in average daily traffic on access roads into the Installation. A limited number of these may participate in carpooling, ride-sharing, or ride the METRA shuttle bus from Columbus. It is also assumed that personnel would be accessing the post at different times because their work schedules would vary. New parking areas are planned and would be adequate

to support personal vehicles transporting Soldiers and civilian employees to the new BCT facilities. Emergency response would not be adversely affected because roads would be adequate to allow emergency vehicle access. This alternative would not impact Installation security measures in any way. However, increased traffic caused by additional personnel would represent a negligible effect on volumes and capacities of existing roads. ACPs nearest the BCT facilities might experience traffic congestion at peak morning and evening hours. Overall, this alternative would result in some adverse, but minimal, effects on transportation particularly at the ACP nearest the BCT support facilities.

Alternative II: East Harmony Church

Transportation impacts from Alternative II would be the same as those described previously for Alternative I. Existing and planned infrastructure generally would be adequate to meet the needs of anticipated traffic and vehicle increases, although traffic may back up during peak work start and end times at the ACP nearest the BCT facilities. A minimal adverse effect on transportation is anticipated.

Alternative III: No Action

This alternative would involve no construction, but increases in transportation at the Installation from addition of 3,400 Soldiers would occur. As compared to the action alternatives, Alternative III would entail a smaller increase in on-post civilian personnel because only a portion of the additional civilian employees would have office space on-post. Alternative III would also result in an increase of 533 Soldiers driving into Fort Benning from off-post housing. Overall, this would amount in a similar number of employees entering Fort Benning as Alternatives I and II. Off-post personnel increases would add to traffic in the vicinity of offices utilized by these employees. The greatest impact to transportation from this alternative would be lack of additional parking facilities to support the additional soldiers and civilian employees. This would result in a moderate adverse impact to transportation as a result of the no-action alternative.

4.2.6 Utilities

The assessment of impacts to utilities is based on comparing existing use and condition to proposed changes in these resources. The analysis compares current utility usage for applicable functions with anticipated future demands to determine potential impacts. The threshold level of significance for utilities is the potential for change in demand resulting from the proposed action to significantly affect the ability of a utility provider to service existing customers; in addition, significance is determined by the ability of facilities to effectively accommodate additional demands. There would be no additional utility services added to the ranges and training areas as a result of Alternatives I, II, and III.

Alternative I: North, East, and South Harmony Church

Construction of the BCT facilities at the Alternative I site would result in the need to connect and distribute supporting utility systems to multiple facility and building sites including, but not limited to: electrical, potable water, sanitary sewer with lift station, Emergency Management

Communication System FM controllers, storm drainage, and information systems. Utility services would be established through digging of one or more trenches from existing lines along the nearest road or other primary utilities location and placing of new service lines in these trenches, which would then be covered with soil and become "buried" lines. Some portions of the utility lines may be above ground due to limitations on trenching from existing geologic features. Trenching and other utility line construction would commonly affect narrow corridors, although such corridors parallel roads and occur in previously-disturbed ground. For these reasons, adverse impacts from utility installation are expected to be negligible.

Based on approximate numbers of existing and proposed military and civilian personnel, and on-post military dependents, estimated utility use would increase accordingly, by approximately 13 percent. Sustainable design measures would be implemented for new utility systems. During operations, training, and maintenance most electrical usage would occur as a result of buildings in the area and outdoor security lighting. Expansion of the Harmony Church electrical substation and the increased utility demands are not expected to overload the current power generation supplied by Georgia Power. Heating and air conditioning would be supplied by individual self-contained units that are powered by electricity. Replacement and addition of sanitary sewer lines, including additional pipe trenching, manholes, and cleanouts would occur. In terms of water supply, water tank repairs, water line replacement, and addition and replacements of fire hydrants would occur.

The Fire Department's fire reporting communications system cable would be extended to this site with extension of the telephone cable distribution system; cable television and PAO educational television systems would also be extended to facilities in this area. In addition, telephone, fiber optic, and similar communication systems would be extended to this site and updates would be made to communication trunks in the area. Overall, implementation of Alternative I would result in potential minor adverse effects from utility installation and increased use; however, utility systems and services to this area would be improved resulting in a minor positive effect.

Alternative II: East Harmony Church

Construction of the BCT facilities at the Alternative II site would occur as described under Alternative I. Any utility work would be designed to minimize construction or excavation in sensitive ecological areas, wherever practicable. Sustainable design measures would be implemented for new utility systems. Utility demands from construction and operations, including activities as ranges and training areas would increase at the same levels described for Alternative I. Overall, this alternative would result in potential minor adverse effects from utility installation and increased use, and positive effects on utility systems and services to this area.

Alternative III: No Action

Under the no-action alternative, Fort Benning would continue to use and generate the same types of utilities as are currently being managed. Need for utility services would increase in proportion to the 3,400 additional Soldiers training at Fort Benning and increases in on-post non-military employees, although these increases would be less than the increased demands under Alternatives I and II because a greater portion of Soldiers would be living off-post with Alternative III.

Maintenance of existing utility systems would be ongoing. Alternative III would result in potential minor adverse effects from increased utility use by training soldiers, accompanied soldiers and their dependents housed on-post, and increased civilian personnel. However, this would be less of an impact than for Alternatives I and II. Alternative III could also result in a potential minor negative effect if outdated utility systems are not replaced or upgraded in the Harmony Church area.

4.2.7 Hazardous Materials and Waste

The nature and magnitude of potential impacts associated with hazardous materials and wastes depends on the toxicity, transportation, storage, and disposal of these substances. The threshold level of significance for hazardous materials and waste is surpassed if the storage, use, transportation, or disposal of these substances substantially increases the human health risk, environmental exposure, or is a violation of applicable Federal, state, and local requirements, or results in noncompliance with the Installation's hazardous waste (RCRA Part B) permit.

Alternative I: North, East, and South Harmony Church

Construction of BCT support facilities at the Alternative I site could involve some hazardous materials (i.e., ACM and LBP in older buildings), which would be disposed of in accordance with applicable Federal, state, and local requirements as stipulated in the Installation HAZWRAP. A survey for ACM and LBP would be conducted by Fort Benning or a contractor prior to demolition of buildings.

Support facilities where hazardous materials would be stored or used would meet SPCC requirements under AR 200-1, as well as Federal and state requirements, as applicable. These support facilities include, but are not limited to: maintenance facilities, fuel storage tanks, and loading/unloading operations areas. These requirements would ensure that discharges from facilities would not impact ground surfaces, thereby preventing or minimizing soil and water contamination. In addition, operations and training vehicles would be maintained routinely to help identify and repair any conditions that might cause POL leaks. Post-construction BCT activities, including activities at ranges and training areas, would follow the Fort Benning HAZWRAP and Hazardous Waste Management Plan. Munitions would be handled and used in accordance with applicable DoD policies and regulations. Waste military munitions would be handled according to the MMR. Pesticide application, if needed, would be performed in a manner consistent with the pesticide product label. SPCC and Stormwater Pollution Prevention Plan BMPs and operational requirements would be applied to control, minimize, and reduce the potential for spill/release of hazardous materials and hazardous waste.

SWMU site FTBN-047 would be avoided during construction if NFA status is not granted. If NFA status is granted, there would be no limitations on structures that could be built on this site and it would not be avoided.

The additional amount of solid waste generated as a result of the new BCT would result in a substantial increase from current levels. The current and long-term solid waste management contract would be renegotiated to ensure that adequate service is provided. Fort Benning would

request from the contractor that additional refuse containers be placed at the new BCT support facilities and housing areas. Fort Benning would increase the budget for solid waste disposal accordingly. The privately owned state-permitted solid waste landfill located off-post has adequate capacity to accommodate the increased demand Fort Benning will be placing on the landfill (personal communication, Morpeth 2004). The Installation recycling program would be implemented to minimize solid waste streams.

Therefore, there would be no adverse impacts due to management, storage, or disposal of hazardous materials and waste under Alternative I.

Alternative II: East Harmony Church

Construction, operational, and training procedures for hazardous materials and waste under Alternative II would be similar to those described under Alternative I. Although gravel lots or recreation areas could be developed, there would be no placement of structures or site excavation at SWMU site FTBN-019. If construction disturbance in the vicinity is necessary, care would be taken to avoid this site. Test holes would be drilled to ensure no trespass of this closed landfill (personal communication, Morpeth 2004). Disturbance of SWMU site FTBN-047 would be avoided if NFA status is not granted. If NFA status is granted, there would be no limitations on structures that could be built on this site and it would not be avoided. No adverse impacts due to management, storage, or disposal of hazardous materials and waste would occur under Alternative II.

Alternative III: No Action

Under the no-action alternative, Fort Benning would continue to use and generate the same types of materials and wastes as are currently being managed at the Installation. Increases in materials and waste due to increased number of Soldiers training on-post and increased number of non-military employees working on-post would be similar to those described for Alternative I. Existing procedures for the management, procurement, handling, storage, and disposal of hazardous materials would remain unchanged. Therefore, following existing procedures, no effect to management, storage, or disposal of hazardous materials and waste would occur under the no-action alternative.

4.2.8 Public Health and Safety

The threshold level of significance for public health and safety is exceeded when demand for police, fire, and health services cannot be met, construction would occur within an area with UXO, the SDZ exclusion area overlaps with personnel support areas, the SDZ of a range extends off the Installation, or when a violation of OSHA standards occurs during construction. During construction under Alternatives I and II, only authorized personnel would be allowed within the footprint for construction; in addition, all workers must adhere to safety standards established by the Installation November 2003 U.S. Army Corps of Engineers Safety and Health Requirements Manual EM 385-1-1, and OSHA.

Alternative I: North, East, and South Harmony Church

There would be no construction or operational impacts to public health and safety from Alternative I within the proposed BCT support facilities site. The new BCT would include experienced soldiers trained in emergency response which would assist with current police and fire protection and health services efforts at the installation, resulting in no adverse impacts to existing services.

Although the probability of finding UXO at this site is extremely low, if any is found during construction the U.S. Army Corps of Engineers would follow established procedures to address the situation and would contact Fort Benning Explosive Division (EOD) (personal communication, Chauvey/Holloway 2004). EOD would make determinations if emergency treatment of munitions is required and recover, destroy, or otherwise manage waste munitions as necessary to protect human health, safety, and the environment.

The proposed BCT facilities at Alternative I site is not within the vicinity of any range or SDZ.

Within ranges and training areas, training rounds would be contained entirely within existing SDZs. Installation restrictions would prohibit any unauthorized entry into areas potentially containing UXO. Overall, there would be no adverse effects to public health and safety as a result of this alternative.

Alternative II: East Harmony Church

There would be no impacts to public health and safety from Alternative II. Like Alternative I, if UXO is encountered during site preparation or other ground disturbance activities, the US Army Corps of Engineers in coordination with Fort Benning EOD personnel would follow established procedures to remove the UXO. The proposed BCT at Alternative II site is not found within the vicinity of the firing range or ordnance impact areas. Therefore, no effects to the SDZ from a firing range or ordnance impact area would occur under Alternative II within the ranges and training areas, impacts to public health and safety. In summary, there would be no adverse effects to public health and safety as a result of this alternative.

Alternative III: No Action

Under the no-action alternative, no construction would occur and impacts to public health and safety would be limited to those resulting from increased activities in ranges and training areas, as described for Alternative I. Overall, there would be no adverse effects to public health and safety as a result of this alternative.

4.2.9 Air Quality

The threshold level of significance for air quality is the violation of applicable Federal or state laws and regulations, such as the CAA and amendments, and the potential for NOV for the failure to receive applicable state permits (such as those required for construction projects) prior to initiating a proposed action or the failure to follow permit requirements.

Alternative I: North, East, and South Harmony Church

Criteria used to determine the significance of increases in air emissions are based on federal, state, and local air pollutant standards and regulations. Air quality impacts would be considered significant if they: 1) increase ambient pollutant concentrations above the applicable NAAQS, 2) contribute to an existing violation of the NAAQS, 3) impair visibility within federally mandated PSD Class I areas, or 4) result in nonconformance with the CAA or SIP.

Sources of potential air emissions at the Installation include particulate matter from dust (PM_{10}) and fuel combustion ($PM_{2.5}$), CO and PM from prescribed burning activities, and nitrous oxides from the combustion of fuels. The military operations of the BCT should not constitute a significant source of air emissions under the Georgia Rules for Air Quality Control, Chapter 391-3-1 (personal communication, Gustafson 2003; GA DNR 1998). A letter from Harold Reheis, Director, GA DNR, to the Southeastern Regional Environmental Office (SREO), dated 21 April 2003, states the "use of vehicles and equipment in military training and military exercises, on ranges and unpaved road and trails, is not subject to Rule (n)." The letter further states "...Rule (n) is not applicable to most vehicle and equipment travel at a military base, since the travel is not a part of a process and there is no manufactured product."

Emissions from implementation of Alternative I include both temporary construction/demolition and long-term (6 to 10 years) operational emissions. Construction emissions associated with this alternative include fugitive dust (PM_{10}) from grading and combustion (primarily CO and NO_x, and smaller amounts of VOCs, SO_x, and $PM_{2.5}$) from heavy-duty diesel construction equipment exhaust. Construction emissions estimates were based on conservative assumptions; Appendix A provides these assumptions. Exhaust emissions from heavy-duty diesel construction equipment were based on a mix of typical construction equipment; mobile source emissions for commuting Soldiers assumed that 1,700 would, on average, commute from off-Post and travel 50 miles round trip. These numbers may annually fluctuate due to deployments and could increase or decrease by about 15 percent under any of the alternatives. However, as will be presented below, the percent contribution from placing the BCT at Fort Benning would not exceed any existing thresholds for criteria pollutant emissions.

Table 4-1 summarizes emissions during the demolition, construction, and operational phases—Appendix A provides more specific emission calculation data and assumptions. Emissions from demolition and grading are estimated to occur over a 2-month construction timeframe (Phase I) in 2005. The remainder of the emissions is from equipment related to building, landscaping, and parking lot construction (Phase II) over 6 months in 2005.

Table 4-1 Projected Pollutant Emissions						
Project Elements	***Pollutants (Tons/Year)***					
	CO	*VOCs*	*NO_X*	*SO_x*	*PM_{10}*	*$PM_{2.5}$*
Demolition	0.00	0.00	0.00	0.00	0.00	0.004
Construction						
Phase I	0.60	0.24	2.26	0.23	33.45	8.55
Phase II	54.18	10.50	18.2	2.01	0.00	1.41
Construction Subtotal	*54.78*	*10.74*	*20.46*	*2.24*	*33.45*	*9.96*
Mobile Sources	165.11	13.14	14.98	0.41	0.00	0.58
Point Sources	1.44	0.09	1.76	0.01	0.00	0.13
Operational Subtotal	*166.55*	*13.23*	*16.74*	*0.42*	*0.00*	*0.71*
Total	**221.33**	**23.97**	**37.24**	**2.66**	**33.45**	**10.67**

Sources: USAF Air Conformity Applicability Model (ACAM) 4.0.1 (Air Force 2003). U.S. EPA 2004.

Emissions from construction and demolition activities under Alternative I would increase emissions in the short-term. There would be an approximate increase of less than 0.1 percent in CO, VOCs, NO_x, and SO_x, and a 0.2 percent increase in PM_{10} and $PM_{2.5}$ within the Columbus GA-AL MSA. For long-term, operational activities, criteria pollutants would increase less than 0.07 percent for VOCs, SO_x, and $PM_{2.5}$; approximately 0.1 percent for CO and NO_x, and no changes would occur in PM_{10} criteria pollutant emissions within the Columbus GA-AL MSA.

The impacts of fugitive dust generated during construction would be minimized through implementation of dust control measures (e.g., dust palliative application on soil and excavated materials). Emissions during the construction period would increase; however, they would be well below the regional thresholds, and therefore, regionally insignificant. In summary, implementation of Alternative I (including combined demolition, construction, and operational emissions) represents less than 1 percent for each of the criteria pollutants and would not change overall attainment conditions within the MSA. Therefore, this alternative would result in minor short- and long-term adverse effects.

Alternative II: East Harmony Church

Under Alternative II, impacts described under Alternative I would be similar since this location is adjacent to and within the same counties as Alternative I. Therefore, the alternative would result in minor short- and long-term adverse effects.

Alternative III: No Action

Under the no-action alternative, mobile source impacts described under Alternative I would increase by approximately 15 percent because Soldiers would be commuting from off post. This amount would still represent only a minor increase in criteria pollutants within the MSA and would be well below the regional thresholds, and therefore, regionally insignificant. If this alternative were implemented, it would result in minor short- and long-term adverse effects.

4.2.10 Noise

Noise impacts result from perceptible changes in the overall noise environment that increase annoyance or affect human health. Annoyance is a subjective impression of noise wherein people apply both physical and emotional variables. To increase annoyance the cumulative noise energy must increase measurably.

Human health effects such as hearing loss and noise-related awakenings can result from noise. Neither of these represents an issue for Alternatives I, II, and III. No individual or communities would be consistently exposed to noise levels sufficient to affect hearing. Noise-related awakenings would be, at most, rare. Most noise-generating training and construction activity would occur during daylight hours, thereby reducing the potential for awakening people to negligible levels.

The threshold level of significance for noise is the existence of any Zone III (incompatible) noise contours where sensitive noise receptors (residences, hospitals, libraries, and etc.) are located. Occasional single noise events may bother some, but would not represent community annoyance.

Noise levels were generated using the following operational data associated with the placement of the BCT at Fort Benning. Under Alternatives I, II, and III the range and anticipated number of days needed to support training requirements for the $5^{th}/25^{th}$ BCT are presented in Table 4-2.

Table 4-2 BCT Training Range Needs and Total Range Demand with $5^{TH}/25^{TH}$ BCT

Range Type	*5/25th BCT Demand Days*
10/25 Meter	1
Field Fire	0
Record Fire	3
Known Distance	1
Bayonet Course	0
Hand Grenade Accuracy	15
Hand Grenade Qualification	15
Hand Grenade Live Fire	15
Night Infiltration Course	0
Squad Defense	0
Urban Assault Course	26
Breach Facility	26
Shoot House	26
Hand to Hand	0
Confidence Course	0
Rappel Training	0
Med/Heavy Equip Training Course	0
Obstacle Course	0
Land Navigation	0
Infantry Training Brigade Ranges	
Multipurpose Machine Gun	13
LAW	6

Table 4-2 BCT Training Range Needs and Total Range Demand with 5TH/25TH BCT (con't)	
Range Type	***5/25th BCT Demand Days***
Mortar	1
M203 Grenade Launcher	8
Individual Movement Techniques	0
Mine Training Area	0
Squad Battle Course	0
Military Operations Urban Terrain (MOUT)	56
Sniper Field Fire Range	4
Engineer Qualification Range	78
Multipurpose Training Range	40
Multipurpose Range Complex	34

Note: Standards in Training Commission (STRAC) have not yet been developed for the BCT so the estimates for required range days in this table are based on generic Infantry Active Component STRAC. These estimates probably understate the true requirement.

Alternative I: North, East, and South Harmony Church

Under the proposed action to place the BCT at the Alternative I location, noise levels associated with construction would not increase any noise levels off-Post, since they would be confined to the Post and short term in nature. However, an increase in range activities (e.g., wheel and track vehicle traffic, tank movement, and artillery firing) from BCT operations would extend the Zone III noise contour (representing noise that is incompatible with noise-sensitive receptors such as residences) 3,280 feet (1,000 meters) farther off-Post (Figure 4-1). These noise levels could increase the number of citizens annoyed and present a potential impact to those experiencing a change; however, no change in noise sensitive areas, such as schools and/or hospitals, would be affected by Zone III noise levels if the Alternative I location were chosen. As mentioned previously, no individual or communities would be consistently exposed to noise levels sufficient to affect hearing. Noise-related awakenings would be, at most, rare. Most noise-generating training and construction activity would occur during daylight hours, thereby reducing the potential for awakening people to negligible levels. However, because the Zone III noise contour would affect a larger area, there would be long-term minor adverse noise effects associated with the training activities with the implementation of Alternative I.

Alternative II: East Harmony Church

Effects of locating the BCT at Alternative II would be similar to those described for Alterative I. Construction would occur in the same general area as under Alternative I and would not significantly change existing noise contours; however, BCT training would occur at the same level and location as described under Alternative I. Therefore, increases in noise contours would be consistent with those presented for Alternative I in Figure 4-1. If Alternative II were

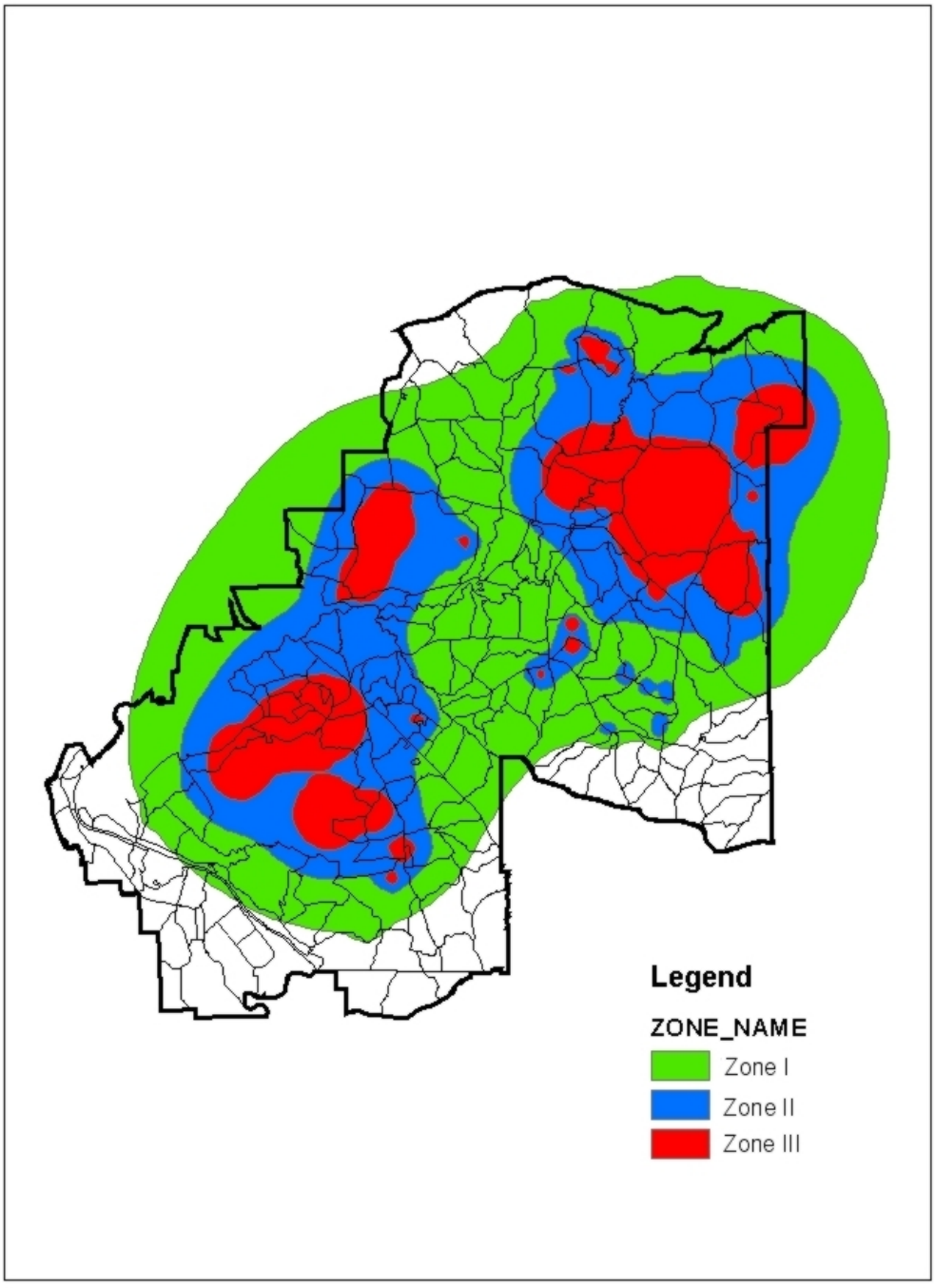


Figure 4-1 Projected Noise Contours

implemented, noise levels would increase off-Post in the eastern portion of Fort Benning. This would increase the number of citizens annoyed and present a potential impact to those experiencing a change, and thus result in long-term minor adverse noise effects associated with the training activities. However, no change in noise sensitive areas, such as schools and/or hospitals, would be affected by Zone III noise levels if Alternative II location were chosen.

Alternative III: No Action

Under Alternative III, temporary BCT facilities would not be constructed, therefore, the short-term, on-Post noise levels associated with these activities would not occur, or change existing noise contours. However, BCT training activities would still take place and the noise contours would increase and be consistent with those presented in Alternative I, Figure 4-1. As was found under Alternatives I and II, noise levels would increase off-Post in the eastern portion of Fort Benning, which would result in a long-term minor adverse effects. This would increase the number of citizens annoyed and present a potential adverse impact to those experiencing a change; however, no change in noise sensitive areas, such as schools and/or hospitals, would be affected.

CHAPTER 5

CUMULATIVE EFFECTS

5.0 CUMULATIVE EFFECTS

The CEQ defines cumulative impacts as the "impact on the environment which results from the incremental impact of the action(s) when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (1508.7 CEQ, 1978). As such, the analysis must determine if the action proposed under the alternatives in this EA, when added to the projects in the Columbus GA-AL MSA, has the possibility to result in either adverse or positive incremental impacts. These other projects all occur within a geographical (spatial) defined region of influence (ROI) or affected environment, which is defined in the following subsection. Projects presented may occur within the next 10 years, since they have the potential of occurring within the same time period as the proposed action. Information for these projects has been obtained from the Final Environmental Impact Statement, Digital Multi-Purpose Range Complex (DMPRC), Fort Benning, Georgia (U.S. Army 2004a), planning documents of surrounding communities, and Fort Benning personnel. In addition, the DMPRC EIS considered the cumulative effects of these projects, as well as the BCT action, and so provides support for the following analysis.

5.1 Region of Influence

The overall Region of Influence (ROI) for the purposes of this EA is shown in Figure 5-1 and consists of Chattahoochee, Marion, Muscogee, and Harris counties, Georgia, and Russell County, Alabama; this ROI includes the cities of Columbus and Buena Vista, Georgia, Phenix City, Alabama, and the Fort Benning Military Installation. Individual ROIs have also been established for some media (or resources); these ROIs may be larger or smaller in size than the overall ROI and are defined in subsequent sections.

5.2 Past and Present Actions within the ROI

The cities of Columbus, Georgia and Phenix City, Alabama are the sites of numerous residential developments, commercial/retail facilities, industrial activities, and recreational opportunities. The ongoing projects with the potential to impact the ROIs are discussed below; each project is also identified on Figure 5-1 by its associated number in *parentheses*. Approximately three years ago, Columbus and Fort Benning completed a "Land Exchange," swapping two parcels of land, known as the North Tract and the South Tract, for which an EIS and ROD were prepared (Fort Benning 1999). Columbus is currently developing the 2,470-acre North Tract (*24*) located adjacent to the Fort Benning northwestern boundary line. This development will be primarily industrial, mixed with recreational land use. In exchange, Fort Benning received the South Tract land (*32*), a 2,536-acre parcel located at the southernmost end of the Installation, which is currently used by the Installation for training and land management (reforestation and habitat restoration) purposes; future use of the South Tract may include land-navigation training. Other recently completed or ongoing projects within the ROI include the following projects.

Cumulative Projects

Legend

- Cumulatives
- Roads
- Installation Boundary
- Training Compartments
- Installation Cantonment Area

Figure 5-1

- Installation of Anti-Terrorist/Force Protection Measures (*10 through 16*) – This consists of the construction of an enhanced physical security perimeter barrier around the Installation's four cantonment areas that includes either fence, guard rail, or use of existing natural barriers (e.g., streams and steep ridges) and establishment of permanent access control points (ACPs) at the Installation's seven entry points. Drainage for perimeter roads and erosion control measures will be required, in addition to protective lighting at the seven ACPs. An EA and FNSI were prepared for this project (U.S. Army 2003). Approximate size of the overall project area is 20 to 25 acres.

- Safety improvements to the Highway Interchange at I-185/US 280 in Columbus (to the north of Fort Benning) (*28*) – Highway improvements are currently underway and consist of reconstructing the interchange 105 at I-185 and US 280. Safety improvements also include removing and replacing guardrails and possibly installing medians (*29*) along 10.5 miles of US 280. Approximate size of the overall project area is 5 to 10 acres.

- FY03 Barracks Project (*2*) (FY04) – Work consists of the construction of a new barracks complex along Dixie Road, Main Post, Fort Benning, GA. The new barracks will be located across from the existing Easley and McAndrews ranges. The project also includes the demolition of six existing buildings. Approximate size of the overall project area is 30 to 35 acres.

- Privatization of the Water and Wastewater Treatment System (*5*) (FY04) – The wastewater treatment system at Fort Benning, which consists of three facilities and a network of underground piping, is currently being privatized. The contract for the system will include the day-to-day upkeep of the system and will require the contractor to abide by all Federal, state, and Installation policies and guidelines. The process will include either the "mothballing" or demolition to slab of the existing water and wastewater treatment facilities and the construction of a series of new underground utility transport lines, for the purpose of connecting the existing on-Post facilities to the new owner's off-Post facilities. During the construction of these connection lines (18 to 24 months), the new owner will utilize the on-Post facilities. Alternately, the new owners may continue operation at the existing facilities. Approximate size of the overall project area is 50 to 60 acres. An EA, FNSI, and Supplemental EA were prepared for this action.

- National Infantry Museum (*22*) (FY04) – Work consists of constructing a new infantry museum on the land lying between South Lumpkin and Fort Benning roads on the Installation's border with the City of Columbus. The existing museum, located on Baltzell Avenue, Main Post, Fort Benning, would be reutilized in another manner, but would not be demolished. Approximate size of the overall project area is 20 to 30 acres.

- Ongoing Improvements and Training at Ranges and other Training Areas (no map location) – Minor range construction and target maintenance projects are ongoing activities at Fort Benning. These types of improvements have been assessed for environmental effects and NEPA documentation has been prepared for these ongoing activities. Additionally, training activities are ongoing at ranges and other training areas;

there have been some recent increases in training operations of the same type and nature as historical training activities.

5.3 Reasonably Foreseeable Future Actions within the ROI Fort Benning Community

There are several construction projects planned for implementation on Fort Benning proper during the same time frame as the projects analyzed in the alternatives in this EA. Some of the projects have been previously identified in the Installation's Master Plan (Fort Benning 2003) and have been preliminarily assessed for environmental impacts via the NEPA process; however, each project is still pending final approval and subsequent compliance with NEPA, except as indicated below.

The projects determined to have the potential to impact the ROIs are listed below. In addition, each project is identified on Figure 5-1 by its associated number. Fiscal Year (FY) refers to the period between 1 October and 30 September of each year and is the time period the Army uses for budget phases.

- Barracks Replacement (*1*), Kelley Hill, Phase III (FY05) – Work would consist of the demolition of existing buildings (9043, 9046, 9047, 9053, 9054, 9055, 9057, 9058, and 9074), the construction of new facilities, and landscaping around the new facilities in the Kelley Hill area of Fort Benning. Approximate size of the overall project area is 10 to 15 acres.

- Barracks and Tactical Equipment Shop Projects (*3*) (FY05-07) – Work would consist of the construction of additional barracks and tactical equipment shops across from existing 106 ranges (beyond Easley and McAndrews ranges) along Dixie Road. These projects are currently in the design phase only. Approximate size of the overall project area is 15 to 20 acres.

- Receptee Barracks (*4*) (FY07) – Work would consist of the construction of additional barracks, a dining facility, soldiers' community center, and physical training building with a running track at Sand Hill. The project would also include the demolition of the existing dining facility. Approximate size of the overall project area is 10 to 15 acres.

- Infantry Squad Battle Course (ISBC) (*6*) (FY04) – Work would consist of the conversion of an existing Fort Benning range, Galloway Range, into an Infantry Squad Battle Course and would include the removal/replacement and upgrading of existing targetry, the construction of associated support facilities, the demolition of currently existing temporary buildings on site, and associated utility placement. Approximate size of the overall project area is 180 to 190 acres.

- Infantry Platoon Battle Course (IPBC) (*7*) (FY06) – Work would consist of the construction of a new IPBC in the A12 portion of Fort Benning and would include tree clearing, grading, cut-and-fill, construction of the range and target firing area, and placement of targetry, in addition to the construction/emplacement of support facilities,

access roads and trails, and associated utilities. Approximate size of the overall project area is 1,000 acres. Fort Benning is currently preparing an EA for this action.

- Ammunition Supply Point (ASP) Expansion (*8*) (FY05) – Work would consist of the construction of two aboveground general storage facilities, 11 earth-mounded ammunition storage igloos with associated loading platforms, two small quantity ammunition huts, and ammunition surveillance building, and forklift storage/recharge facilities at the existing ASP on Fort Benning. Work would also include the demolition of 19 structures currently existing within the ASP compound. Approximate size of the overall project area is 10 to 15 acres.

- Direct Support/General Support (DS/GS) (*9*) Consolidated Maintenance Facility (FY07) – Work would consist of constructing an approximately 112,000 square-foot equipment maintenance complex for DPW. Facility to be located in the southwest quadrant of US280/27 and First Division Road. Approximate size of the overall project area is 10 to 15 acres.

- Rehabilitation of North/South Maneuver Corridors (*17, 18, 19*) (FY undetermined; pending funding approval) – Work will consist of the rehabilitation of two existing maneuver corridors in the north and three existing maneuver corridors in the south for training utilization by the 3rd Brigade/3rd Infantry of Fort Benning. The areas are contained within the Oscar 1-15 training compartments in the north and the D2-16, L3, E3-4, and J6-7 training compartments in the south. These are existing maneuver areas that will have erosion control and soil stabilization measures conducted, in addition to selective thinning, in order to more fully support maneuvers by the mechanized vehicles. Approximate size of the overall project area is 5,000 acres.

- Combined Club Facility (*20*) (FY undetermined; pending funding approval) – Work would consist of the demolition of the existing Follow Me Golf Course Clubhouse, construction of a new clubhouse to contain the combined functions of the Golf Course Club and Officer's Club, and the redevelopment of the existing Follow Me Golf Course. Approximate size of the overall project area is 5 to 10 acres.

- New Post Exchange (AAFES) (*21*) (FY undetermined – pending final decision by AAFES) – Work would consist of constructing a new AAFES on the land across the street from the existing AAFES on Custer Road, Main Post, Fort Benning. The old AAFES would be abandoned and reutilized in another format; it is not scheduled for demolition at this time. Work would additionally consist of landscaping and parking lot construction. Approximate size of the overall project area is 10-15 acres.

- Digital Multi-Purpose Training Range (*23*) (DMPTR, aka Hastings Range Upgrade) (FY06 - project in planning phase only) – work would consist of upgrading the existing Hastings Range to a DMPTR; would include removal/replacement and upgrading of existing targetry, expansion of the existing tank trails, the construction of associated support facilities, the demolition of currently existing temporary buildings on site, and

associated utility placement. Approximate size of the overall project area is 100 to 150 acres.

- Permanent Support Facilities for the BCT (34 and 35) – The DoD will undergo a round of BRAC in 2005. After BRAC decisions are made, it is possible that the Army may decide to permanently station the 5th Brigade of the 25th Infantry Division at Fort Benning. To plan for this potential situation, locations that would be suitable for both temporary and potential future permanent facilities at Fort Benning were studied. The goal of this study was to ensure adequate space could be allocated in locations that would enable a smooth transition from temporary to permanent facilities, should the BCT be permanently stationed at Fort Benning.

  The site that potentially would be used if the 5th Brigade is permanently stationed at Fort Benning would depend on the decision made for the temporary support facilities because temporary facilities would remain in place until permanent facilities designed for the same use are constructed in a different location. If Alternative I were selected, temporary support facilities (i.e., the proposed action) would be distributed in portions of North, Central, and South Harmony Church areas. Consequently, the ideal location for the permanent facilities would be in East Harmony Church. A conceptual layout of potential permanent support facilities in this location is shown in Figure 5-2.

  These facilities would be built on permanent foundations with durable construction materials. The function of facilities constructed would essentially duplicate those of the temporary facilities. Based on the layout (refer to Figure 5-2) the facilities would cover an area of approximately 272 acres, although some areas between facilities may remain undisturbed. Following construction, areas between support facilities and other areas disturbed during construction would be revegetated. Once permanent facilities are in place, the temporary modular buildings associated with Alternative I could be removed and may be reused on- or off-Post.

  If Alternative II were selected, temporary support facilities would be located within the East Harmony Church area. In this case, potential permanent facilities would be focused primarily in the North Harmony Church area with some facilities in Central and South Harmony Church, as shown in Figure 5-3. Based on the layout, the facilities would cover an area of approximately 246 acres, although some areas between facilities would remain undisturbed. Following construction, temporary modular buildings could be removed and may be reused on-or off-Post. Areas disturbed during construction could be revegetated.

  Documentation to comply with NEPA would be prepared to address permanent facilities to support the BCT at Fort Benning or elsewhere.

- Support Facilities (39) – Fort Benning proposes to develop facilities to include barracks, unit operations facilities, POV parking areas, and a motor park (which may include vehicle maintenance, unit storage, parking for organizational vehicles such as tanks and Humvees, and other related features) for a Forward Support Battalion for the 29th Infantry

Concept I: Layout of Potential Permanent Support Facilities

Legend

- Drainage
- Brigade
- Forward Support Battalion
- Recreation and Personal Training
- Personally Owned Vehicles (POV)
- Roads

Building Type

- Administration
- Barracks
- Batallion Headquarters
- Brigade Headquarters
- Company (CO) Operations
- Chapel
- Dining Facility (DFAC)
- Fitness / Recreation Center
- Unit Operations
- Vehicle Maintenance

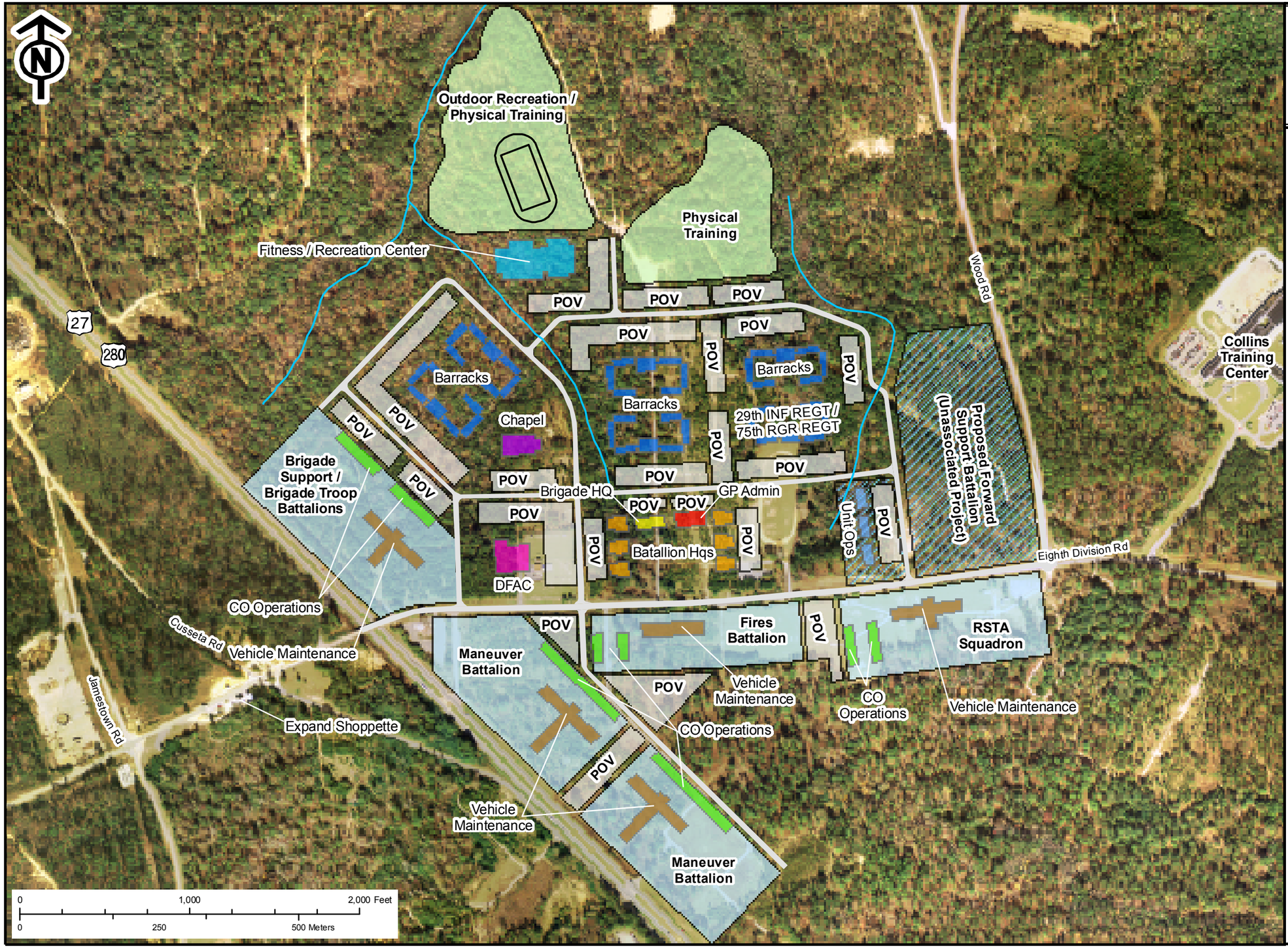
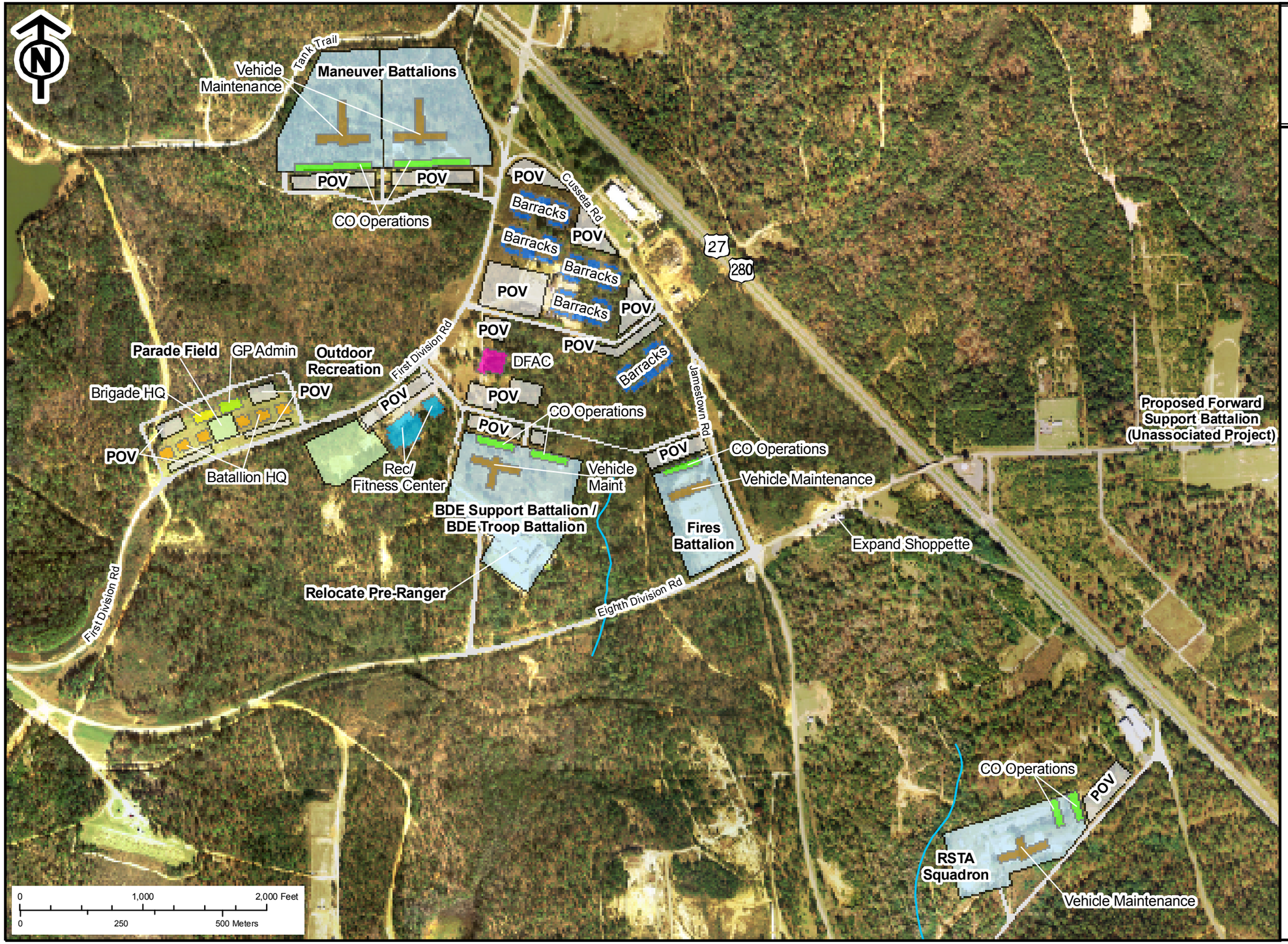


Figure 5-2

Concept II: Layout of Potential Permanent Support Facilities



Legend

- Drainage
- Battalion
- Outdoor Recreation
- Personally Owned Vehicles (POV)
- Roads

Description

- Barracks
- Batallion HQ
- Brigade HQ
- Company (CO) Operations
- Dining Facility (DFAC)
- Recreation/Fitness Center
- General Purpose (GP) Admin
- Vehicle Maintenance

Figure 5-3

Regiment. These facilities are planned in East Harmony Church north of Eighth Division Road and west of Wood Road. They would be adjacent to the east side of the BCT temporary support facilities associated with Alternative II. The proposed facilities for the 29th Infantry Regiment area would cover approximately 54 acres.

- Communications Tower (36) – A communication tower has been proposed for construction in the South Harmony Church area, west of Cusseta Road and south of El Caney Road.

- National Guard Pre-Ranger Complex Expansion (37) – The National Guard Pre-Ranger Complex is located within the South Harmony Church area. The National Guard proposes to establish an area south of First Division Road that would be used for field training exercises.

- Child Development Center (38) (FY09) – Construction of a child development center designed for children ages 6 to 10 is proposed and would have capacity for 310 children for before and after school as well as summer and other no school days. This facility would replace the 70-year-old Patch School, which has a capacity of 190 children. The Patch School cannot be expanded to support 120 additional spaces and the building needs costly repairs. However, the Patch School would be retained and reassigned to another activity/agency on Fort Benning. The overall project area is anticipated to cover 3 to 5 acres.

- Operational Readiness Barracks Complex (no map location), long-range future project – A battalion-sized barracks complex to support current Reserve training missions (annual training) and supplement the CONUS Replacement Center is proposed. The proposed capacity of the open bay barracks is 1,200 Soldiers (at 72 square feet per Soldier) with a maximum capacity of 1,440 Soldiers (at 60 square feet per Soldier) The project also includes a dining facility with a 1,000 person capacity and an arms storage facility in accordance with Army standards.

- Central Issue Facility (no map location) – Expansion of the existing Central Issue Facility on Main Post and construction of an annex in the Harmony Church cantonment area is proposed to begin in fiscal year 2005. The existing Central Issue Facility (Building 2386) has exceeded its maximum storage capability due to the Global War on Terrorism requirements. Tents are currently leased to store organizational clothing and individual equipment items, which is a security risk to the inventory stored in the tents.

- Army Transformation at Fort Benning (no map location), long-range future project – The 3rd Infantry Division is currently undergoing a major reorganization as part of the Army transformation process. The Division's three Brigades were divided into four smaller units (U.S. Army Forces Command 2004). While no plans currently exist that would affect any of the other units at Fort Benning, the Installation must prepare for this contingency and comply separately with environmental planning requirements. Approximately 400 Soldiers are expected to arrive at Fort Benning in Fall 2005 and will

become part of the 3rd Brigade of the 3rd Infantry Division (personal communication, Martz 2004). The Kelley Hill cantonment area supports the 3rd Brigade.

Columbus-Buena Vista-Phenix City Community

Interviews in 2004, conducted for the DMPRC FEIS (U.S. Army 2004a) with Richard Bishop, Deputy City Manager (Planning/Development) for the City of Columbus, and Greg Glass, City Planner for the City of Phenix City, were used to identify the pending construction and transportation system improvement projects proposed for Highway 108 the Columbus-Phenix City area during the same time frame as the BCT construction and training operations.

The projects listed below are those determined to have the potential for moderate adverse effects to resources within the ROI. Other projects were identified through these interviews and the review of relevant city planning documentation; however, they were analyzed and determined to not have the potential for incremental impacts or to contribute to cumulative impacts in the ROI. The projects identified, but not included for study in this document, may be viewed in the Columbus-Phenix City Transportation Improvement Plan. Reviews of the planning documents for these cities and for the Georgia DOT are defined in detail below.

- Oxbow Meadows and Marina, Lumpkin Road (*25*), Columbus, GA (FY undetermined; tentatively scheduled to begin within the next 2-3 years), – Work would consist of the further development of the Oxbow Meadows Environmental Learning Center by creating additional outdoor classrooms, a series of walking trails, a series of hiking trails, and pavilion, and the construction (to include dredge and fill) of a 350-slip capacity marina. Approximate size of the overall project area is 10 to 15 acres.

- Phenix City Riverwalk Phase II, (*26*) Phenix City, AL (FY undetermined) – Work would consist of the construction of a hiking/biking trail between the 13th and 14th Street bridges in Phenix City. Approximate size of the overall project area is 5 to 10 acres.

- Alternative Transportation System, Phase II, (*27*) North Riverwalk, Columbus, GA (FY undetermined; scope of work decision pending implementation of Chattahoochee River Restoration Project, below) – Work would consist of continuing to construct the hiking/biking trail (Riverwalk) northward along the Chattahoochee River from 12th Street to 14th Street. Approximate size of the overall project area is 5 to 10 acres.

- Widening/Improvements to Buena Vista Road, (*30*) Columbus, GA (FY 07) – Work would consist of widening and reconstructing 1.15 miles of an existing two (2) and four (4) lane road to a four (4) through-lane system with turn lanes and medians, as required. Approximate size of the overall project area is 5 to 10 acres.

- Widening/Improvements to St. Mary's Road, (*31*) Columbus, GA (FY 05) – Work would consist of widening 0.71 miles of a two (2) lane road to a three (3) and four (4) lane system, with intersection improvements as needed. Approximate size of the overall project area is 5 to 10 acres.

- Chattahoochee River Restoration (*32*) (FY05) – Work would consist of breaching the Eagle-Phenix Dam and the City Mills Dam along the Chattahoochee River, in order to restore the historic and natural flow of water along this portion of the river, which extends from just north of the City of Columbus and down to its most southern edge. Approximate size of the project area is 2.5 miles (approximately 35 acres).

5.4 Assessment of Cumulative Effects

Cumulative impacts that could result from the proposed action and other potential projects in the ROI have been addressed in the DMPRC FEIS, Section 5.4 (U.S. Army 2004a). Thresholds of significance and the potential to cumulatively effect the ROI have also been addressed in the DMPRC FEIS and as NEPA provides (32 CFR 1502.21), this EIS and analysis is being incorporated by reference.

For this EA, the proposed action alternatives (Alternative I and II) are so similar that the differences in effects are negligible when considering all past, present, and reasonably foreseeable future actions for a cumulative effects analysis. Alternative III, the no-action alternative, would result in no change to the baseline of cumulative effects and is therefore not analyzed in detail in this section. The preliminary analysis of each of the action alternatives resulted in a finding of no cumulative effect, either adverse/positive or direct/indirect for all resources. The following summarizes the analysis that would be applicable to both Alternatives I and II.

Soils. Many of the projects (such as highway improvements, future operational facilities, new barracks, and other construction-related projects) occurring in the ROI would cause ground disturbance. These activities increase the potential for soil erosion if stabilization were not to occur. However, Fort Benning applies several BMPs (including those noted in Section 4.1.1) that minimize soil disturbance and actively prevent the potential for erosion and other types of soil degradation. With the application of these types of BMPs, soil loss would be limited to short-term effects that would not be significant or cumulatively adverse.

Water Quality. Construction projects that disturb soils have the greatest potential to affect water quality if sediments are washed into water courses. Contaminants may leach into ground water over time, but tests conducted on Fort Benning within the Harmony Church area have not identified a water contamination problem. BMPs are employed at Fort Benning to prevent hazardous and toxic material spills and to take prompt action to clean up spill when they inadvertently occur. Therefore, it is not anticipated that cumulative adverse impacts would occur under the proposed action.

Biological Resources. Continued adherence to INRMP guidance (U.S. Army 2001a) in the siting and construction of new facilities, and adherence to standard operating procedures for training activities and the maintenance of natural resources on ranges and training areas would assure the avoidance of significant cumulative impacts. Continuing implementation of conservation measures for the RCW on Fort Benning in consultation with USFWS, as needed, for current and future projects will help to ensure that the RCW population remains on track towards recovery or increases. The foraging habitat analysis (prepared by M. Barron) indicates that Cluster R2-01 will lose approximately 8 acres of habitat. It currently has 278 acres of available foraging habitat

with 78 acres within a quarter mile of the cluster center. The removal will leave the cluster with 270 acres. The cluster currently has 86 acres of good quality habitat, 172 acres of medium quality habitat, and 20 acres of low quality habitat. The project will not remove any good quality habitat. Eight acres of medium quality habitat will be removed, six of which will be removed from the quarter mile foraging circle. The quarter mile foraging circle currently has 45 acres of good quality foraging habitat available and this acreage will not be impacted by the project. All acres within the quarter mile foraging circle are contiguous. The habitat removal will not impact the contiguity of the habitat, and none of the good quality habitat will be removed. Additionally, since the habitat will still be contiguous, we do not anticipate that the demographics of the birds in the area will be impacted. This cluster should not be adversely impacted by the project.

Land Use. New development would preclude the use of land for some recreational purposes within Fort Benning. However, historically land within Fort Benning has undergone many changes; and much of the land in the Harmony Church area was actively used during World War II (with numerous buildings and roads) until the facilities no longer served a useful purpose and were demolished and replanted as pine forest. This pattern is likely to continue. The projects identified as potentially occurring within the reasonably foreseeable future are compatible with one another and are compatible with existing and historic military land uses. Therefore, no adverse cumulative impacts are anticipated if either Alternatives I, II, or III were implemented.

Recreation. The increases in military personnel at Fort Benning add to the demand for existing recreational opportunities. Some temporary recreational facilities would be constructed with the proposed action, which would help to balance the demand with new facilities. Existing pay-as-you-go recreational facilities at the Main Post cantonment area together with the off-post recreational opportunities will be able to accommodate the demand without adverse effects (personal communication, Addison 2004). However, the increases in military personnel also result in increased demand for training, which makes training areas less available for recreational uses. Operational tempos in training fluctuate regularly at Fort Benning because the units stationed there are highly deployable. Initially, the addition of the 5th BCT would not reduce the available acreage in training areas that are available for recreational uses because the 3rd BCT is currently deployed to Iraq. However, when the 3rd BCT returns from Iraq (anticipated in January or February 2006), this additional training need would add to others and, cumulatively, result in a significant reduction (60 to 70 percent) in the number of acres available for undeveloped recreation such as hunting, fishing, and bird watching. Because military training at Fort Benning must take precedence, recreationists would need to conduct these outdoor activities in other locations; such locations are available, but may not be as conveniently located. This cumulative impact is not considered significant because alternative recreational facilities exist and the availability of training areas for recreational uses would remain available when operational training tempos are not maximized.

Socioeconomics. The proposed action, together with past, ongoing, and potential future actions, would be expected to accumulate in economic benefits to the local community from increased spending for goods and services. Housing needs could be met. The proposed child development center at Fort Benning would provide a service to the Fort Benning community at large and would be expected to satisfy the cumulative demand from project proposals outlined previously.

Therefore, no adverse cumulative impacts are anticipated if any of the action alternatives were implemented under this EA.

Cultural Resources. No incremental impacts to cultural resources in association with the proposed action are anticipated. There are no cultural resources that would be directly affected by this proposed action and alternatives, nor would any cumulative adverse impacts occur in conjunction with past, present, or foreseeable projects. If during construction, previously unidentified cultural resources were discovered, activities would be stopped at that site and the Fort Benning archaeologist would be notified. Coordination with appropriate federal, state, and local agencies as well as American Indian tribes, would be conducted to determine the importance of the site and how it should be treated before construction activities at the site resume.

Transportation. Personnel increases at Fort Benning, associated with new mission and facility construction, together with the civilian personnel, contractors, and deliveries to support these Soldiers, would increase traffic on the existing ROI road network. This is most likely to affect traffic entering or exiting Fort Benning at the ACP during peak hours when personnel are arriving for work or leaving to return to off-post homes. Additional future actions may be required to improve existing ACPs or to establish an additional ACP if there are further personnel increases. However, for this EA, these incremental effects would not be cumulatively significant at this point in time.

Utilities. Existing utility service providers have capacity to adapt to the cumulative increased demands associated with the proposed projects. However, distribution systems to bring those services to project sites may be required. Environmental disturbances associated with extending utility services to new locations would be addressed in future NEPA documentation for those proposed actions; however, at this time, no significant adverse cumulative effects are anticipated if the BCT were implemented for any of the action alternatives.

Hazardous Materials and Waste. While some of the proposed projects would require hazardous materials or waste use, most would be confined to pesticides, petroleum, oils, and lubricants in association with construction and equipment maintenance activities. To address these needs, Fort Benning would continue to implement their BMPs for these hazardous materials and waste use (described previously in Chapter 3, Hazardous Materials and Waste) and adhere to rigorous regulations for the use, storage, handling, and disposal of such wastes and comply with applicable regulatory requirements. Consequently, no cumulative adverse impacts from the use of hazardous materials and waste would be anticipated.

Public Health and Safety. Some anticipated projects, including the force protection measures and highway safety improvements, are designed to protect public health and safety. The increase in personnel associated with some of these proposals would increase the demand for health care and emergency services. It is anticipated that existing health care facilities available at Fort Benning and surrounding communities can satisfy this need. An emergency aid station would be included with the temporary BCT support facilities, which would provide a public safety service to this portion of the Installation and would serve the regional area. Therefore, it is not

anticipated that the BCT would pose a cumulative adverse impact to public health and safety if it were implemented.

Air Quality. If numerous construction-related projects were to occur concurrently with the site preparation and construction work associated with the proposed temporary BCT support facilities, there could be short-term, localized cumulative effects to air quality. Increases in PM would be most prevalent because these activities would include ground disturbance and travel over unpaved surfaces (fugitive dust—PM_{10}) as well as increased traffic (combustion emissions $PM_{2.5}$). Although it is not possible to quantify the potential additive impact of potential future projects with the current project, the resultant cumulative effects would not be expected to significantly degrade the air quality in the area.

Noise. The proposed action, together with past, ongoing, and potential future actions, would be expected to increase noise contours in the short term within the Installation's boundary. Long-term noise contours would increase in the northeast portion of the Installation due to the increase in range activities both from the BCT and cumulatively from other projects within the Installation. However, no individual or communities would be consistently exposed to noise levels sufficient to affect hearing and the cumulative impacts would be minor but not considered significant.

CHAPTER 6

CONCLUSIONS

6.0 CONCLUSIONS AND RECOMMENDATIONS

The no-action alternative, as described under baseline conditions, would not meet the purpose and need for providing adequate BCT infrastructure and support facilities. The construction of facilities considered under the proposed action, Alternatives I and II, would meet this need.

The predicted environmental consequences of Alternative I and Alternative II (action alternatives), and Alternative III (no action) on the relevant environmental resource categories are presented in Table 6-1, along with a summary of best management practices and any required mitigation measures. The proposed action alternatives are not expected to result in significant adverse impacts in any resource category. Implementing the proposed action would not significantly affect existing conditions in the Harmony Church area or in adjacent areas. Minor effects would occur to soils, water, biological resources, transportation, and air quality. Positive effects would result in increased employment and expenditures into the local economy and improved utility services and systems.

Table 6-1 Comparison of Impacts by Alternative

Resource	*Proposed Action*		*No Action*
	Alternative I	*Alternative II*	*Alternative III*
Natural Environment			
Soils	• Removal of soils from construction and operations, but not an adverse effect • BMPs and measures employed to minimize effects from short-term erosion and sedimentation • Prior to site disturbance an SPCC and ESPCP would be developed and NPDES and other applicable permits would be obtained • BMPs implemented to control, minimize, and reduce soil contamination from pollutants such as hazardous materials and/or waste • Temporary minor, potential adverse impacts from training activities **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Minor potential adverse effects from construction and operations • BMPs and measures employed to minimize effects from short-term erosion and sedimentation • Prior to site disturbance an ESPCP would be developed and NPDES and other applicable permits would be obtained • BMPs implemented to control, minimize, and reduce soil contamination from pollutants such as hazardous materials and/or waste • Temporary minor, potential adverse impacts from training activities **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Current activities would continue with no change to existing soil conservation measures • Temporary minor, potential adverse impacts from training activities **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations

Table 6-1 Comparison of Impacts by Alternative

Resource	***Proposed Action***		***No Action***
	Alternative I	*Alternative II*	*Alternative III*
Water Quality	• Minor potential sedimentation effects from construction and training • BMPs implemented to reduce erosion and sediment transport • Streams would be avoided and buffer zones established • No impacts to wetlands • Storm water systems designed to minimize potential discharge impacts • BMPs implemented to control, minimize, and reduce contamination on waterways from pollutants such as hazardous materials and/or waste **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Minor potential sedimentation effects from construction and training • Alternative II site has fewer drainages with the potential to be affected • BMPs implemented to reduce erosion and sediment transport • Streams would be avoided and buffer zones established • No impacts to wetlands • Storm water systems designed to minimize potential discharge impacts • BMPs implemented to control, minimize, and reduce contamination on waterways from pollutants such as hazardous materials and/or waste **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Minor potential sedimentation or spill effects from training • BMPs implemented to reduce erosion and sediment transport • BMPs implemented to control, minimize, and reduce contamination on waterways from pollutants such as hazardous materials and/or waste **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations

Table 6-1 Comparison of Impacts by Alternative

Resource	***Proposed Action***		***No Action***
	Alternative I	*Alternative II*	*Alternative III*
Biological Resources	• No significant impacts to biological resources • Construction activities would temporarily disturb wildlife • Increased use of training ranges would slightly increase potential disturbance of wildlife • Potential loss of 45 acres of existing RCW foraging habitat, and 84 acres of potential RCW foraging habitat • Management practices implemented to reduce potential impacts to biological resources including protected species **Mitigation Measures**: *Construction*— Adherence to existing Installation management practices for RCW; no other protected species present. No additional mitigation is proposed. A monitoring plan would be developed to ensure mitigation *Operations and Maintenance* None proposed; adherence to BMPs and existing Army regulations	• No significant impacts to biological resources • Construction activities would temporarily disturb wildlife • Increased use of training ranges would slightly increase potential disturbance of wildlife • Potential loss of 16 acres of existing RCW foraging habitat and 43 acres of potential RCW foraging habitat • Management practices implemented to reduce potential impacts to biological resources including protected species **Mitigation Measures**: *Construction*— Adherence to existing Installation management practices for RCW; no other protected species present. No additional mitigation is proposed. A monitoring plan would be developed to ensure mitigation compliance *Operations and Maintenance* None proposed; adherence to BMPs and existing Army regulations	• No changes to current biological resources • Current conservation measures would continue **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations

Table 6-1 Comparison of Impacts by Alternative

Resource	*Proposed Action*		*No Action*
	Alternative I	*Alternative II*	*Alternative III*
Human Environment			
Land Use	• Increase in developed uses over approximately 247 acres would be consistent with existing land uses • Would require demolition of four to six World War II era buildings • No significant impact to land use due to compatibility with existing management and master plans • Added potential for encroachment issues from increased training **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Increase in developed uses over approximately 238 acres would be consistent with existing land uses • Would require relocation of dog kennel and Bradley drivers' training course • No significant impact to land use due to compatibility with existing management and master plans • Added potential for encroachment issues from increased training **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• No change from current land uses within Alternative I and II sites • Added potential for encroachment issues from increased training **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations
Recreation	• Minor increase in demand for recreational facilities • Pistol club shooting range would be relocated to an area used for similar activity • Minor decrease in land for hunting and hiking due to changed land use and increased use of ranges **Mitigation Measures:** *Construction*—None proposed *Operations and Maintenance*—None proposed	• Minor increase in demand for recreational facilities • Minor decrease in land for hunting and hiking due to changed land use and increased use of ranges **Mitigation Measures:** *Construction*—None proposed *Operations and Maintenance*—None proposed	• Minor increase in demand for recreational facilities • Minor decrease in land for hunting and hiking due to changed land use and increased use of ranges **Mitigation Measures:** *Construction*—None proposed *Operations and Maintenance*—None proposed

Table 6-1 Comparison of Impacts by Alternative

Resource	***Proposed Action***		***No Action***
	Alternative I	*Alternative II*	*Alternative III*
Socioeconomics	• Addition of 3,400 Soldiers, 1,802 military families, and additional civilian employees at Fort Benning • Minor beneficial effects to employment and local economy from longer-term positions and short-term construction job opportunities and expenditures • No significant impact to affected communities including minority and low-income populations **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• Addition of 3,400 Soldiers, 1,802 military families, and additional civilian employees at Fort Benning • Minor beneficial effects to employment and local economy from longer-term positions and short-term construction job opportunities and expenditures • No significant impact to affected communities including minority and low-income populations **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• Addition of 3,400 Soldiers, 1,802 military families, and additional civilian employees at Fort Benning • Community housing and hotel occupancy would be inadequate due to need to house Soldiers off-post • Minor beneficial effects to employment and local economy from longer-term positions • No significant impact to affected communities including minority and low-income populations **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed
Cultural Resources	• No impacts to cultural resources • No archaeological resources recorded in the Alternative I location • No impacts to significant buildings or structures eligible for the National Register • No traditional resources or properties known to occur **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• No impacts to cultural resources • No archaeological resources recorded in the Alternative II location • No National Register eligible architectural resources occur • No traditional resources or properties known to occur **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• No changes to existing cultural resources would occur **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations

Table 6-1 Comparison of Impacts by Alternative

Resource	***Proposed Action***		***No Action***
	Alternative I	*Alternative II*	*Alternative III*
Transportation	• Minor adverse effects to traffic at ACPs • Potential for temporary delays and alternate traffic patterns during construction • Post-construction increase of 2,226 daily military commuters and additional civilian commuters • No impact to security measures or emergency response **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• Minor adverse effects to traffic at ACPs • Potential for temporary delays and alternate traffic patterns during construction • Post-construction increase of 2,226 daily military commuters and additional civilian commuters • No impact to security measures or emergency response **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• Minor adverse effects to traffic at ACPs • Increase of approximately 2,799 daily military commuters, and additional civilian commuters • Moderate adverse effect due to lack of adequate parking facilities on-post **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed
Utilities	• Trenching and other utility construction would affect only narrow corridors • No additional services in training areas • Sustainable designs implemented to minimize utility usage impacts • Minor increases (~13 percent) in utility usage not expected to adversely affect utility service providers • Improved services and systems in the Alternative I area via addition of services and repair and replacement of outdated systems **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• Trenching and other utility construction would affect only narrow corridors • No additional services in training areas • Sustainable designs implemented to minimize utility usage impacts • Minor increases (~13 percent) in utility usage not expected to adversely affect utility service providers • Improved services and systems in the Alternative II area via addition of services and repair and replacement of outdated systems **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• No change from existing utility service infrastructure • No additional services in training areas • Privatization and maintenance of systems would continue • Minor increase (less than 13 percent) in utility; no repair/replacement of existing outdated systems to potentially support other activities in the area and minimize spill potential **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed

Table 6-1 Comparison of Impacts by Alternative

Resource	*Proposed Action*		*No Action*
	Alternative I	*Alternative II*	*Alternative III*
Hazardous Materials and Waste	• Prior to demolition of buildings, surveys for ACM and LBP would be conducted • Material disposal would adhere to the Installation HAZWRAP • Facilities for storage of hazardous materials would meet SPCC requirements • No adverse impacts to management, storage, or disposal of hazardous materials and waste **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Prior to demolition of buildings, surveys for ACM and LBP would be conducted • Material disposal would adhere to the Installation HAZWRAP • Facilities for storage of hazardous materials would meet SPCC requirements • No adverse impacts to management, storage, or disposal of hazardous materials and waste **Mitigation Measures**: *Construction*—None proposed; adherence to BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• Existing procedures for the management of hazardous materials and waste would remain unchanged • Training material disposal would adhere to the Installation HAZWRAP **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations
Public Health and Safety	• No impacts to public health and safety • No impacts to police, fire and health services • No known UXOs, but if encountered, UXO would be removed using established procedures • No effects to the SDZ **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• No impacts to public health and safety • No impacts to police, fire and health services • No known UXOs, but if encountered, UXO would be removed using established procedures • No effects to the SDZ **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed	• No impacts to public health and safety • No impacts to police, fire and health services • Use of existing procedures result in no effects to training SDZ or UXOs **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed

Table 6-1 Comparison of Impacts by Alternative

Resource	***Proposed Action***		***No Action***
	Alternative I	*Alternative II*	*Alternative III*
Air Quality	• No significant impact to air quality • Temporary (8-month) construction emissions of 56.22 tons CO, 10.83 tons VOCs, 22.26 tons NO_x, 2.25 tons SO_x, 33.45 tons PM_{10}, and 9.96 tons $PM_{2.5}$ • Long-term (10 years) operational emissions increases from additional commuting • No change in attainment status or regional pollutant emissions **Mitigation Measures**: *Construction*—None proposed; adherence to construction BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• No significant impact to air quality • Temporary (8-month) construction emissions of 56.22 tons CO, 10.83 tons VOCs, 22.26 tons NO_x, 2.25 tons SO_x, 33.45 tons PM_{10}, and 9.96 tons $PM_{2.5}$ • Long-term (10 years) operational emissions increases from additional commuting • No change in attainment status or regional pollutant emissions **Mitigation Measures**: *Construction*—None proposed; adherence to construction BMPs and existing Army regulations *Operations and Maintenance*—None proposed; adherence to BMPs and existing Army regulations	• No change to current air quality conditions or attainment status **Mitigation Measures**: *Construction*—None proposed *Operations and Maintenance*—None proposed

Table 6-1 Comparison of Impacts by Alternative

Resource	*Proposed Action*		*No Action*
	Alternative I	*Alternative II*	*Alternative III*
Noise	• Noise would increase in the short-term within the Installation, but would not create an adverse effect • Noise outside the Installation boundaries would increase and potentially affect receptors in the northeastern portion of the Installation. This increase, while potentially adverse, would not create significant impacts • Measures employed to minimize effects from noise increases include majority of operations during daytime and continued **Mitigation Measures**: *Construction*—None proposed; adherence to existing Army practices and regulations *Operations and Maintenance*—None proposed; adherence to existing Army practices and regulations	• Noise would increase in the short-term within the Installation, but would not create an adverse effect • Noise outside the Installation boundaries would increase and potentially affect receptors in the northeastern portion of the Installation. This increase, while potentially adverse, would not create significant impacts • Measures employed to minimize effects from noise increases include majority of operations during daytime and continued **Mitigation Measures**: *Construction*—None proposed; adherence to existing Army practices and regulations *Operations and Maintenance*—None proposed; adherence to existing Army practices and regulations	• Noise outside the Installation boundaries would increase and potentially affect receptors in the northeastern portion of the Installation. This increase, while potentially adverse, would not create significant impacts • Measures employed to minimize effects from noise increases include majority of operations during daytime and continued implementation of noise complaint process **Mitigation Measures**: *Construction*—Not applicable *Operations and Maintenance*—None proposed; adherence to existing Army practices and regulations

Both Alternatives I and II would be suitable to implement. Environmental effects would be similar with both alternatives, although Alternative II would have less potential for water sedimentation because there are fewer drainages that could potentially be affected and Alternative II would affect fewer acres of RCW foraging habitat. However, because there is the potential that the 5th/25th BCT could be permanently stationed at Fort Benning following implementation of the 2005 BRAC decision, there is a desire to preserve the best site in case permanent facilities are required in the future. Alternative II is better suited for the functional operations of the BCT because of the cohesiveness of the keeping the facilities clustered together. Additionally, because of the relatively flat terrain and the environmental characteristics of the Alternative II site, this alternative would be expected to have a less potential for long-term environmental effects, which is important for more permanent facilities. Therefore, Alternative II is the recommended action for implementation.

CHAPTER 7

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7.0 REFERENCES CITED

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CHAPTER 8

PERSONS AND AGENCIES CONTACTED

8.0 PERSONS AND AGENCIES CONSULTED

The following lists the agencies, organizations, and individuals consulted.

FEDERAL CONTACTS

U.S. Army, Fort Benning

- Debbi Addison, Director of Morale, Welfare, and Recreation
- Michael Barron, Wildlife Biologist, RCW Specialist
- John Brown, Environmental Protection Specialist
- Pat Burns, Acting Housing Division Chief
- Katie Caldwell, Industrial Engineer, Plans and Operations Division
- Patrick Chauvey, Chief, Environmental Management – Compliance
- Brandon Cockerel, Garrison Commander's Office
- Polly Gustafson, Engineering and Environment Contract Employee, Environmental Specialist, Environmental Management Division
- Christopher Hamilton, Cultural Resource Manager
- Gary Hollon, Soil Conservation
- Kenneth Holloway, Facility Master Planner
- Ron Johnson, Chief, Transportation Division
- Melissa Kendrick, Engineering & Environment Contract Employee, Environmental Specialist/NEPA Coordinator, Environmental Management Division
- Christopher Mickey, Information Management
- Dorinda Morpeth
- James Parker, Forester, Land Management Branch
- Felix Seda, ISCP/SPCC/SWP3/EPCRA Program Manager
- Ron Smith, Project Manager, Residential Communities Initiative
- Pete Swiderek, Chief, Environmental Management - Conservation
- Fred Weekley, Range Control
- Joe Wilkins, Water Quality

Local CONTACTS

Greater Columbus Chamber of Commerce

- Mayo A. (Biff) Hadden, Sr. Vice President Economic Development

CHAPTER 9

LIST OF PREPARERS AND CONTRIBUTORS

9.0 LIST OF PREPARERS AND CONTRIBUTORS

Marianne Aydil, *Air Quality*
B.S., Chemical Engineering, Tulane University, 1987
Ph.D., Chemical Engineering, University of Houston, 1992
Years of Experience: 11

Christina Cummings, *Production Coordinator*
A.A.S., Administrative Office Technology, Boise State University, 1999
Years of Experience: 5

Beth Defend, *Description of the Proposed Action and Alternatives*
B.A., Technical Journalism, Colorado State University, 1982
Years of Experience: 22

Mike Dungan, *Biological Resources*
B.A., Zoology, U.C. Santa Barbara, 1975
M.S., Ecology and Evolutionary Biology, University of Arizona, 1979
Ph.D., Ecology and Evolutionary Biology, University of Arizona, 1984
Years of Experience: 20

James Fee, *GIS Analysis and Graphics*
B.S., Geography, Arizona State University, 1996
Years of Experience: 8

Chareé D. Hoffman, *Human Environment*
B.S., Biology, Christopher Newport University VA, 1999
Years of Experience: 5

Kelly Mitchell, *Cultural Resources*
B.S., Anthropology, University of Idaho, 1994
Years of Experience: 10

Dana Novak, *Land Use, Soils, and Water*
B.S., Environmental Science, Ohio State University, 1997
Years of Experience: 7

Kevin Peter, *Quality Control*
B.A., Anthropology, Pomona College, CA, 1975
M.A., Anthropology, Washington State University, 1986
Years of Experience: 24

Kathy L. Rose, *Human Environment*
B.A., Political Science/German, University of Massachusetts/Amherst, 1980
M.A., International Relations, George Washington University, 1983
M.S., Forest Resource Management, University of Idaho, 1996
Years of Experience: 9

Terry Rudolph, *Cultural Resources*
B.A., Anthropology, Florida State University, 1975
M.A., Anthropology, Southern Illinois University, 1981
Years of Experience: 23

Bill Wilbert, *Range Operations*
BLA, Landscape Architecture, Pennsylvania State University, 1977
Years of Experience: 27

APPENDIX A

AIR QUALITY

Fort Benning Air Emission Summary Report for 2005

Source Category	Emissions, Tons/Year					
	CO	***NO_x***	***SO_x***	***VOC***	***PM_{10}***	***$PM_{2.5}$***
Area Sources						
Demolition	0.00	0.00	0.00	0.00	0.00	0.004
Other Phase I Const. – Grading Equip.	0.60	2.26	0.23	0.24	0.00	0.19
Other Phase I Const. – Grading Ops.	0.00	0.00	0.00	0.00	33.45	8.36
Other Phase II Const. – Acres Paved	0.00	0.00	0.00	0.04	0.00	0.00
Other Phase II Const. – Mobile Equipment	6.58	15.70	1.94	1.43	0.00	1.27
Other Phase II Const. – Non-Res. Arch. Ctgs.	0.00	0.00	0.00	1.10	0.00	0.00
Other Phase II Const. – Res. Arch. Ctgs.	0.00	0.00	0.00	6.08	0.00	0.00
Other Phase II Const. – Stationary Equip	44.64	1.16	0.06	1.67	0.00	0.03
Other Phase II Const. – Workers Trips	1.92	0.11	0.00	0.12	0.00	0.02
Other Phase II Const. – Mobile Equip	0.00	0.00	0.00	0.00	0.00	0.00
Other Phase II Const. – Non-Res. Arch. Ctgs.	0.00	0.00	0.00	0.00	0.00	0.00
Other Phase II Const. – Res. Arch. Ctgs.	0.00	0.00	0.00	0.00	0.00	0.00
Other Phase II Const. – Stationary Equip.	0.00	0.00	0.00	0.00	0.00	0.00
Other Phase II Const. – Workers Trips	0.00	0.00	0.00	0.00	0.00	0.00
Total	**53.75**	**19.23**	**2.23**	**10.68**	**33.45**	**9.87**
Point Sources						
Other Const. – Facility Heating	1.03	1.27	0.01	0.06	0.00	0.09
Total	**1.03**	**1.27**	**0.01**	**0.06**	**0.00**	**0.09**
Mobile Sources						
Mobile – Base Employee Commute VMT	151.66	9.41	0.00	11.89	0.00	0.00
Mobile – On-Road GOV VMT	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road Base Support Vehicles	13.45	5.58	0.41	1.26	0.00	0.58
Total	**165.11**	**14.98**	**0.41**	**13.14**	**0.00**	**0.58**
Point Sources						
Other Const. – Facility Heating	1.43	1.75	0.01	0.09	0.00	0.13
Residential Space Heating	0.01	0.01	0.00	0.00	0.00	0.00
Total	**1.44**	**1.76**	**0.01**	**0.09**	**0.00**	**0.13**
GRAND TOTAL	**221.33**	**37.24**	**2.66**	**23.97**	**33.45**	**10.67**

Sources: ACAM Technical Guidance Document, 2003 ACAM/Mobile 6 software using defaults. U.S. EPA—Emission Inventory Improvement Program, EIIP Document Series, Volume 9: Particulate Emissions.

Air Quality Calculation Assumptions/Inputs					
Description	***Year 2005/ Quarter***	***Acreage***	***Acres Graded***	***Grading Days****	***Construction Days***
Demolition	05/01	7,434 ft^2	NA	NA	15
Barracks	05/02	247 units	10	30	60
Headquarter Buildings	05/02	71,477 ft^2	2	5	90
UNICOF	05/03	184,991 ft^2	5	10	30
Arms Vaults	05/03	16,080 ft^2	0.5	1	10
Miscellaneous Support Facilities	05/03	42,890 ft^2	2	3	75
Vehicle Maintenance Facilities	05/03	100,719 ft^2	4	5	90
Paved Parking Areas	05/04		30	60	
*Assumes graded areas would be watered twice daily to control particulate materials.					

Other Assumptions:

Privately owned vehicles for 1,700 personnel living off post would commute 50 mile roundtrip each day.

APPENDIX B

DISTRIBUTION LIST

APPENDIX B
DISTRIBUTION LIST
FOR PUBLIC NOTICE AND ENVIRONMENTAL ASSESSMENT

All individuals on this list were mailed a copy of the notice of availability for the EA. Persons who received both the notice of availability and the EA are annoted with a double asterisk.

I. MUNICIPAL AND COUNTY ELECTED AND APPOINTED OFFICIALS

Honorable Robert S. Poydasheff
City of Columbus, Mayor
100 Tenth Street
6th Floor, Government Center Tower
Post Office Box 1340
Columbus, GA 31993

Chairman, Chattahoochee County
Board of Commissioners
Mrs. Dallas P. Jankowski
Post Office Box 299
Cussetta, GA 31805-0299

** Mr. Mike Gaymon
Greater Columbus Chamber of Commerce
P.O. Box 1200
Columbus, GA 31902

Mr. Myron Wells, Chairman, Marion County
Board of Commissioners
240 Cool Springs Road
Buena Vista, GA 31803

Mr. Julius Hunter
District 3
139 Whippoorwill Lane
Columbus, GA 31906

Mrs. Evelyn Turner-Pugh
District 4
325 Jefferson Drive
Columbus, GA 31907

** Mr. Victor W. Cross
Phenix City-Russell County Chamber of Commerce
1107 Broad Street
Phenix City, AL 36867

Mayor H.S. "Sonny" Coulter
601 12th Street
Phenix City, AL 36867

II. TRIBAL, STATE, COUNTY, AND LOCAL GOVERNMENT OFFICIALS

Sen. George Hooks
Senate District 14
P.O. Box 928
Americus, GA 31709

Sen. Ed Harbison
Senate District 15
P.O. Box 1292
Columbus, GA 31902

Sen. Seth Harp
Senate District 16
P.O. Box 363
Midland, GA 31820

Rep. Debbie Buckner
House District 109
Route 1 Box 76
Junction City, GA 31812

Rep. Vance Smith
House District 110
5331 Hopewell Church Rd.
Pine Mountain, GA 31822

Rep. Calvin Smyre
House District 111
1103 Glenwood Road
Columbus, GA 31906

Rep. Richard Smith
6127 Seaton Drive
Columbus, GA 31909

Rep. Carolyn Hugley
House District 113
4019 Steam Mill Road
Columbus, GA 31906

Senator Saxby Chambliss
416 Russell Senate Office Bldg.
Washington, DC 20510

Senator Johnny Isakson
6000 Lake Forrest Drive, Suite 100
Atlanta, GA 30328

Jack Kingston
Georgia-1st, Republican
2242 Rayburn HOB
Washington, DC 20515-1001

Sanford Bishop, Jr.
Georgia-2nd, Democrat
2429 Rayburn HOB
Washington, DC 20515-1002

Jim Marshall
Georgia-3rd, Democrat
502 Cannon, HOB
Washington, DC 20515-1003

Denise L. Majette
Georgia-4th, Democrat
1517 Longworth HOB
Washington, DC 20515-1004

John Lewis
Georgia-5th, Democrat
343 Cannon HOB
Washington, DC 20515-1005

Tom Price
Georgia-6th, Republican
PO Box 425
Roswell, GA 30777

John Linder
Georgia-7th, Republican
1727 Longworth HOB
Washington, DC 20515-4272

Mr. Lynn Westmorland
Georgia-8th, Republican
2753 East Highway 34, Suite 3
Newnan, GA 30265

Charlie Norwood
Georgia-9th, Republican
2452 Rayburn HOB
Washington, DC 20515-1009

Nathan Deal
Georgia-10th, Republican
2437 Rayburn HOB
Washington, DC 20515-1010

Phil Gingrey
Georgia-11th, Republican
1118 Longworth HOB
Washington, DC 20515-1011

Max Burns
Georgia-12th, Republican
512 Cannon HOB
Washington, DC 20515-1012

David Scott
Georgia-13th, Democrat
417 Cannon HOB
Washington, DC 20515-1013

III. LOCAL AND REGIONAL ADMINISTRATORS, FEDERAL AGENCIES, OR COMMISSIONS WITH REGULATORY INTEREST

** U.S. Fish & Wildlife Service
Georgia Office
247 South Milledge Avenue
Athens, GA 30605

** U.S. EPA
Attn: Dr. Gerald Miller
Atlanta Federal Building
61 Forsyth Street
Atlanta, GA 30303-3104

U. S. EPA
Attn: Waste Management Division
Atlanta Federal Building
61 Forsyth Street
Atlanta, GA 30303-3104

** Commander, Savannah District COE
Attn: CESAS-PD-EC (Mr. Coleman)
Post Office Box 889
Savannah, GA 31402-0889

U.S. Department of Agriculture
Soil Conservation Service
Post Office Box 18
Buena Vista, GA 31803

** Georgia State Clearinghouse
Ms. Deborah Stephens, Administrator
Office of Planning and Budget
270 Washington Street, SW.
Atlanta, GA 30334-8500

Mr. Joe Tanner
Department of Natural Resources
205 Butler Street SE, Suite 1252
Atlanta, GA 30334-4910

Mr. Keith Parsons
Georgia DNR, Environmental Policy Division
205 Butler Street
Atlanta, GA 30334-4910

** Georgia DNR, Erosion and Sedimentation Control
205 Butler Street, SE.
Suite 1038, Floyd Towers East
Atlanta, GA 30334

Columbus Consolidated Government
Planning Division
Government Tower – West Wing
Columbus, GA 31902

Columbus/Muscogee County Soil Conservation Service
Government Center – East Wing
Columbus, GA 31993-2399

Mr. Carmen Cavezza, City Manager
Government Center – West Wing
Columbus, GA 31901

IV. CITIZEN ADVISORY GROUPS AND LOCAL INTEREST GROUPS OR PERSONS

Chattahoochee Nature Center
9135 Willeo Road
Roswell, GA 30075

The Nature Conservancy
Post Office Box 2452, Ft. Benning Branch
Columbus, GA 31905-2452

Sierra Club, Georgia Chapter
1447 Peachtree Street N.E.
Suite 305
Atlanta, GA 30309

Audobon Society of Columbus
P.O. Box 442
Hamilton, GA 31811

National Wildlife Society
1401 Peachtree Street N.E.
Suite 240
Atlanta, GA 30309

Georgia Wildlife Federation
11600 Hazelbrand Road
Covington, GA 30014

National Wildlife Society
1401 peachtree St., N.E.
Suite 240
Atlanta, GA 30309

Georgia Forestry Association, Inc.
505 Pinnacle Court
Norcross, GA 30071-3634

V. LOCAL NEWS AND MEDIA

WRBL TV 3 (CBS)
Attn: Legals
1350 13th Avenue
Columbus, GA

WKCN (99.3 FM)
Attn: Legals
1253 13th Avenue
Columbus, GA 31901

WTVM TV 9 (ABC)
Attn: Legals
1909 Wynnton Road
Columbus, GA 31994

WGSY (100 FM)
Attn: Legals
1501 13th Avenue
Columbus, GA 31901

WXTX TV 54 (FOX)
Attn: Legals
6524 Buena Vista Road
Columbus, GA 31994

WOKS (1340 AM) and WXFE (105 FM)
Attn: Legals
P.O. Box 1998
Columbus, GA 31902

Columbus Times
2230 Buena Vista Road
Columbus, GA 31906

Mellow Times News
2904 Macon Road
Columbus, GA 31907

VI. FORT BENNING OFFICIALS

BG Benjamin C. Freakley
Commanding General
Infantry Hall (Bldg 4)
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-OT
Fort Benning, GA 31905

Deputy CG/Assistant Commandant
Infantry Hall (Bldg 4)
Fort Benning, GA 31905

PWD, Southeast Region, IMA
Attn: SFIM-SE-PW-E (Mr. Jim Cobb)
1593 Hardee Avenue SW
Fort McPherson, GA 30330-1057

Commander, U.S. Army Infantry Center
Attn: ATZB-IM
Fort Benning, GA 31905-5122

Commander, 75th Ranger Regiment
Building 2834
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-PO
Fort Benning, GA 31905

Commander, 3rd Brigade, 3rd Infantry Division
Building 9050 (Kelley Hill)
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-JA
Fort Benning, GA 31905

Commander, 29th Infantry Regiment
Building 5500 (Harmony Church)
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-AG
Fort Benning, GA 31905

Commander, 11th Infantry Regiment
Building 2749
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-PA
Fort Benning, GA 31905-0798

Commander, 36th Engineer Group
Building 2827
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-PS
Fort Benning, GA 31905

Commander, Ranger Training Brigade
Building 5024 (Harmony Church)
Fort Benning, GA 31905

Commander, U.S. Army Infantry Center
Attn: ATZB-PSF
Fort Benning, GA 31905

Commander, Infantry Training Brigade
Building 3410 (Sand Hill)
Fort Benning, GA 31905

APPENDIX C

PUBLIC AND STAKEHOLDER INVOLVEMENT PLAN

Environmental Assessment for Temporary Brigade Combat Team Support Facilities and Brigade Combat Team Training, Fort Benning, Georgia and Alabama Public and Stakeholder Involvement Plan (PIP)

17 December 2004

1. PURPOSE

1.1 Need for Project. The Army has decided to temporarily station the 5th Brigade of the 25th Infantry Division or a Brigade Combat Team (BCT) at Fort Benning. As such, modular temporary support and training facilities are needed so that Soldiers, expected to arrive in the Fall of 2005, will have sleeping quarters, dining facilities, personal vehicle parking areas, mission/operational buildings, training areas, and all the other support facilities needed to operate a BCT. The Environmental Assessment (EA) addresses the proposed action and action alternatives to provide these support, operational, and training facilities necessary for a new BCT at Fort Benning.

Fort Benning covers approximately 184,000 acres, of which more than 168,000 acres are allocated for training and approximately 12,500 acres are used for cantonment areas. The ranges and training areas as well as some support services (such as family housing, Post Exchange, recreation centers, etc.) available in the existing cantonment area would be used by the BCT Soldiers. However, the Installation does not have adequate barracks, motor pools, vehicle maintenance facilities, storage units, and some of the other support facilities needed in reasonably close proximity to each other to provide for the needs associated with the new BCT.

1.2 Need for Public and Stakeholder Involvement Plan. This Public Involvement Plan (PIP) presents a comprehensive means of satisfying legal requirements while enhancing community knowledge and participation in the planning for the proposed implementation of Temporary BCT Support Facilities and BCT Training at Fort Benning. Throughout this PIP, "public" is used to broadly describe individuals who are in communities near the proposed project site or that may be interested or affected by the proposed action or alternatives. "Stakeholder" is used to identify those entities that have an additional relationship to Fort Benning environmental resources or regulatory or governmental duties. Stakeholders include the federally-recognized American Indian Tribes associated with the Fort Benning area (Tribes); federal, state and local governmental agencies with regulatory authority over Fort Benning (e.g., United States Fish and Wildlife Service [USFWS] and Georgia State Historic Preservation Office); and interested public agencies and citizens.

1.2.1 Public involvement required by National Environmental Policy Act (NEPA). The primary law that drives public involvement is the National Environmental Policy Act (NEPA). NEPA requires federal agencies, such as the Army at Fort Benning, to prepare an environmental analysis of the proposed action and alternatives. Potential environmental impacts, both direct and indirect, are identified for the proposal and each alternative, and possible mitigation for any negative impacts is presented. Also, cumulative impacts (i.e., incremental impacts when considering other projects or actions in a region of affect) are identified as well as any resultant mitigation.

An EA is the appropriate level of NEPA documentation for the Temporary BCT Support Facilities and BCT Training. The Council for Environmental Quality (CEQ) has NEPA oversight for the federal government and has published regulations and guidance for preparation of an EA.

The Army supplements NEPA and the CEQ directions with Army Regulation 200-2, Environmental Effects of Army Actions (AR 200-2), current version effective 29 March 2002. AR 200-2 provides guidelines for the contents of an EA and the processes required for full environmental analysis with participation by public, stakeholders, and regulators. This PIP will not restate the provisions of AR 200-2, so attention to the specific requirements provided therein is required to fully comply with AR 200-2 and the Army's guidance on public and stakeholder participation and scoping. NEPA requires opportunities for public participation, often called public scoping, during preparation of an EA. Public interaction is based on two-way communication that reflects the needs of the community, and may utilize such methods as notices, brochures, news releases, web page information, summaries, draft documents, public meetings, comments, and/or other methods. This PIP will address the means of meeting the NEPA and AR 200-2 public involvement requirements.

1.2.2. Other Laws and Regulations. There are several other laws and regulations that require public notices and participation during the planning phases of a federal project and some *may be* relevant to the implementation of the proposed BCT support facilities and BCT training activities. Although NEPA may address some of the topics and issues in the EA, Fort Benning needs to satisfy the requirements of these other laws and regulations.

1.2.3 Goals of Plan. Fort Benning is committed to meeting the legal requirements and also takes measures for communication and involvement of the public and stakeholders in the planning of the BCT support facilities and training proposal at Fort Benning. Limitations in resources, personnel, and time impose constraints that necessitate an efficient and realistic plan. This PIP must assist the Army planners and be realistic for implementation. Goals for this PIP include:

- Promote an understanding of public and stakeholder involvement requirements and opportunities for better resourcing and scheduling;
- Specify steps needed to meet legal responsibilities for comment opportunities of public members and stakeholders;
- List realistic time frames and responsible persons or offices for each step;
- Coordinate activities to maximize the quality of the information, ensure the information relates to planning actions in process, and incorporate any resultant feedback into future participation or planning processes;
- Incorporate opportunities to present information to better partner with the community; and
- Keep Public Affairs Officer (PAO) informed at all levels.

2. PUBLIC INVOLVMENT PLAN STRUCTURE

This PIP is presented chronologically, providing the anticipated steps, time frames, and actions. Although this plan is meant to serve as a foundation for public and stakeholder involvement, it may have to be adjusted to accommodate changes. Items in this PIP should be evaluated for suitability before engaging in the recommended actions. AR 200-2 divides the scoping process into three phases for simplification: the Preliminary Phase, the Public Interaction Phase, and the Final Phase. Although the majority of public and stakeholder involvement is conducted in the Public Interaction Phase, the other two stages encompass important steps to prepare for and respond to public and stakeholder involvement. This PIP will use the three phases to organize this Plan, although the phases often overlap.

3. PRELIMINARY PHASE

3.1. Initial Internal Scoping. This is an internal Fort Benning action that is normally very informal and may result in limited amounts of documentation. Often proponents of the action start this internal scoping as a part of management planning for the proposal, rather than as a conscious effort to conduct internal scoping. Internal scoping is a process of identifying project requirements, initial environmental concerns, and possibly explore options to address those concerns. In this case, much of the internal scoping occurred during an environmental planning charrette in July 2004. Internal scoping is important because it commences the environmental analysis; however, internal scoping is only a precursor to public and stakeholder involvement. It is important for the proponent (i.e., the Army at Fort Benning) and all those working with the proponent to keep in mind that the decisions regarding the project are not final and are just proposals. Until the process of environmental analysis and documenting a decision is complete, the proponent may modify the project, especially to reduce environmental impacts, incorporate internal concerns, or address potential mitigation measures.

3.1.1. Identify Proponent. Initially, the proponent(s) of the proposal is identified. Usually, the proponent is the person or activity that has initiated the action, has initiated a funding request, and makes the important decisions or recommendations regarding the project. For the implementation of the BCT proposal, the proponent has been identified as the Garrison Commander, and Colonel Ricardo Riera, Garrison Commander, is the POC for this action. As the project planning progresses, other activities may be added to the list of proponents, but currently they should be considered stakeholders, affected or interested parties, or beneficiaries of the project. Fort Benning, Environmental Management Division (EMD), under direction of Mr. Patrick Chauvey, is preparing the environmental planning and documentation for the proponent.

3.1.2. Coordinate with Environmental Planners. For actions that could have, and/or the potential to have, a negative affect or a substantial positive affect on the environment, the proponent is required to coordinate with EMD. Early coordination is required for large or complex projects. Failure to coordinate early can lead to several problems, including failure to maintain a proper NEPA record, delay in project execution, extra expense from redesigns and incorporation of mitigation, plus other problems. Normally the proponent initiates coordination by submitting a completed Fort Benning Form 144-R to EMD to determine what level of NEPA analysis is required; however the NEPA documentation for some proposals obviously requires more complex NEPA analysis and the internal scoping can begin with a kick-off meeting or other ways. For purposes of this NEPA process, the BCT proposal does not represent a high-level of complexity.

3.1.3. Document internal scoping efforts. NEPA compliance involves maintaining records of alternatives explored, issues identified, personnel involved, and other aspects of necessary for internal scoping. Preparing meeting minutes or notes or other evidence of internal scoping is helpful not only for maintaining a project file, but also to later recall information for environmental document preparation. Alternatives or options that may have been considered informally in the internal scoping process may be a basis for alternatives evaluated formally in the EA. This internal scoping does not substitute for public scoping, but it is a necessary precursor.

3.1.4. Coordinate with Public Affairs Officers. The EMD and Directorate of Public Works (DPW) will keep the Fort Benning PAO informed regarding environmental planning and scoping for the BCT proposal. In addition, it is the responsibility of the Fort Benning PAO to keep the

Installation Management Agency (IMA), via the South East Regional Office (SERO), informed of this action and its progress.

3.1.5. Tentative List of Affected and Interested Parties (Mailing List). EMD maintains a NEPA mailing list consisting of individuals or entities that have shown interest in Fort Benning's environmental studies or past projects. The mailing list also includes federal, state, and local government offices, Tribes, and other interested citizens and organizations requesting to be on the mailing list. This list will be reviewed and adjusted for each NEPA action. Moving toward an electronic mailing database would be more efficient for many on the mailing list, and EMD would need to acquire email addresses for those who indicate a preference to receive email rather than traditional mail. However, email will not totally replace mailings that are required for notices associated with the EA process and for those citizens not having email accessibility. For the BCT proposal, Fort Benning has taken the basic Mailing List and adjusted it according to the potential of those individuals to be affected by the proposed BCT support facilities and training action and alternatives and to update addresses. Part of the scoping process includes continued maintenance of the Mailing List—it will be updated routinely to correct, add, and/or remove individuals, organizations, entities, and government agencies.

4. PREPARATION OF THE EA AND FINDING OF NO SIGNIFICANT IMPACT (FNSI)

4.1. Involvement in the EA Development. The EA is the environmental analysis document that is available for public review and comment in the NEPA process for this proposed action. While several partial drafts of the NEPA document may be routed for review at the Installation (internal) level, the first NEPA document to leave the Installation for IMA/SERO and public review is the EA and draft FNSI. The Installation will make every attempt to inform the public of the proposal and address any relevant comments during the Preliminary Phase into the EA analysis.

4.2. EA Preparation.

4.2.1. Drafting the NEPA Document. The EA will follow the general format in AR 200-2 although variations can be made as long as all required information and analysis are included. Reliable data and information are used in the development of the draft BCT EA. It is suggested that, the EA be simultaneously developed with other environmental planning requirements to be efficient and credible.

4.2.2. Gathering Information. Much information and data will be obtained from existing sources; additional surveys and/or analysis for this BCT EA are primarily limited to analysis of potential effects on the endangered red-cockaded woodpecker; this analysis has been completed. Coordination with the proponent, Fort Benning stakeholders, and external participants will be conducted early to ensure the information and data are correctly presented in the EA.

4.2.3. Coordinating with Other Environmental Requirements. Several other environmental requirements involve data collection, potential project impact analysis, and consideration of mitigation measures (if needed). Information obtained to satisfy other requirements will be incorporated into the EA, when available. Often only a summary of the related information is presented, with either a reference to the full document, placing the full document in an appendix, or incorporating by reference. If either referencing or incorporating another document, the full text of the document will be available for public review when the EA is made publicly available. If possible, the public involvement activities will be integrated to meet the requirements of NEPA

and other requirements to present a complete picture to the public of the proposal and potential environmental impacts.

4.2.4. Coordinating with Others: The EA internal Army review will include DPW, Master Planning, EMD Program Manager, and the Office of the Staff Judge Advocate (OSJA). See AR 200-2 651.45(d)(2) for more information.

4.2.5. Cooperating Agencies. At this time, there are no cooperating agencies involved in the NEPA for the proposed development of temporary BCT support facilities and BCT training.

4.3 Publishing the EA for Public and Stakeholder Review and Comment: The Notice of Availability (NOA) of the EA and draft FNSI will be published in *The Bayonet*, the *Columbus Ledger-Enquirer*, and any other suitable media. The Fort Benning website will also include the NOA, as well as the full text of the EA, draft FNSI, and, when possible, the appendices to the EA.

In addition to the announcement of the NOA in the newspaper and website, it will also be mailed to all persons/agencies on the project Mailing List. Fort Benning is required to make hard copies of the EA and draft FNSI available for review to anyone on this list (or in the general public) upon request. At a minimum, hard copies of the EA and draft FNSI will be provided to key Installation personnel, regulatory agencies, and local libraries (both on and off post). The review and comment period for the draft EA and FNSI is 15 days after the first publication of the NOA in the local media.

5. THE FINAL PHASE

After the close of the time frame for public comment on the EA and draft FNSI, the Final Phase for public involvement begins. Comments are considered and any revisions must be incorporated, either by errata sheets for minor revisions or complete revision and production of a revised EA for more comprehensive changes.

5.1. Draft Finding of No Significant Impact (FNSI). No decision will be made until 30 days after the EA and draft FNSI have been made available for public review and comment. The draft FNSI includes the decision (which alternative is selected), a description of alternatives considered, explanation of all factors used in making the decision, and an account of avoidance and mitigation requirements (if applicable). See AR 200-2, Section 651.35(c) for more information.

5.2. Mitigation and Monitoring. If mitigation measures are identified, then monitoring requirements will be identified in the EA and FNSI. A monitoring plan and enforcement programs for any required mitigation will be included in the EA and FNSI and carried out by the proponent. Fort Benning will provide the status of the mitigation and monitoring results upon request. Point of contact for requesting this information is the Fort Benning Public Affairs Office.

Reference:

Army Regulation 200-2, Environmental Effects of Army Actions, Headquarters, Department of the Army, 2002.

APPENDIX D

ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Materials
ACP	Access Control Points
ADA	American Disabilities Act
ADEM	Alabama Department of Environmental Management
ADNL	A-Weighted Day-Night Average Noise Level
AL	Alabama
APE	Area of Potential Effect
ASP	Ammunition Supply Point
BCT	Brigade Combat Team
BMP	Best Management Practice
BRAC	Base Realignment and Closure
CAAA	Clean Air Act and Amendments
CDNL	C-Weighted Day-Night Average Noise Level
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Cfs	Cubic Feet per Second
CHPPM	Center for Health Promotion and Preventative Medicine
CO	Carbon Monoxide
CWA	Clean Water Act
dB	Decibel
DCA	Directorate of Community Activities
DERA	Defense Environmental Restoration Act
DFAC	Dining Facility
DMPRC	Defense Multipurpose Range Complex
DMPTR	Digital Multipurpose Training Range
DNL	Day-Night Sound Level
DoD	Department of Defense
DODDS	Department of Defense Dependant Schools
DPW	Directorate of Public Works
DRMO	Defense Reutilization Marketing Office
DS/GS	Direct Support/General Support
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EOD	Explosive Ordnance Detachment
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPD	Environmental Protection Division
ESCA	Erosion and Sedimentation Control Act
ESMP	Endangered Species Management Plan
ESPCP	Erosion Sedimentation Pollution Control Plan
FNSI	Finding of No Significant Impact
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
GA	Georgia
GA DNR	Georgia Department of Natural Resources
GP	General Purpose
HAZWRAP	Hazardous Waste Remedial Actions Program
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IPBC	Infantry Platoon Battle Course
IRP	Installation Restoration Program
ISBC	Infantry Squad Battle Course
KV	Kilovolt
LAAF	Lawson Army Air Field
LBP	Lead-based Paint
MBTA	Migratory Bird Treaty Act
MCA	Military Construction Army
METRA	Metropolitan Transit
MMR	Military Munitions Rule
MRF	Materials Recovery Facility
MSA	Metropolitan Statistical Area
MWR	Morale Welfare and Recreation
NAAQS	National Ambient Air Quality Standards
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act

NFA	Nor Further Action
NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NZ	Noise Zone
O_3	Ozone
OMA	Operational Management Account
OSHA	Occupational Safety and Health Act
PAO	Public Affairs Office
Pb	Lead
PCB	Poly-Chlorinated Biphenyls
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
PM_{10}	Particulate Matter less than 10 microns in diameter
PMOA	Programmatic Memorandum of Agreement
POL	Petroleum, Oil, and Lubricant
POV	Privately Owned Vehicle
PSD	Prevention of Significant Deterioration
RCI	Residential Communities Initiative
RCRA	Resource Conservation and Recovery Act
RCW	Red-cockaded Woodpecker
RMP	Risk Management Program
RSTA	Reconnaissance, Surveillance, and Target Acquisition
SDZ	Surface Danger Zone
SIP	State Implementation Plan
SMP	Smoke Management Program
SO_2	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasure
SREO	Southeastern Regional Environmental Office
SWMU	Solid Waste Management Unit
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Control Act
UFC	Uniform Facility Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
UXO	Unexploded Ordnance
WWII	World War II
WWTP	Waste Water Treatment Plant